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# REFLECTIONS



## North Central Region SARE ANNUAL REPORT



1999







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# *sare and san*

## REFLECTIONS

### **SARE**

SARE stands for Sustainable Agriculture Research and Education. Funded by the U.S. Department of Agriculture, SARE provides competitive grants and educational opportunities for farmers, scientists, educators, institutions, organizations, and others striving to sustain agriculture, the environment, and communities. Authorized by the 1985 Farm Bill, SARE was first funded in 1988. Nineteen ninety-nine funding totaled \$11.4 million. For more information on the national SARE program, see [www.sare.org](http://www.sare.org), call 301-405-3186, or send e-mail to [vberton@wam.umcd.edu](mailto:vberton@wam.umcd.edu).

### **NCR SARE**

The SARE program is regionally administered by four offices: Western Region SARE, Southern Region SARE, Northeast Region SARE and North Central Region (NCR) SARE, located in Lincoln, Nebraska. The North Central region includes: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. This report showcases NCR SARE activities in 1999. For more information, see [www.sare.org/ncrsare](http://www.sare.org/ncrsare), call 402-472-7081, or send e-mail to [ncrsare@unl.edu](mailto:ncrsare@unl.edu).

### **SAN**

SAN stands for the Sustainable Agriculture Network. SARE's outreach arm, SAN is dedicated to the exchange of scientific and practical information on sustainable agriculture systems using a variety of printed and electronic communication tools. For more information, see [www.sare.org](http://www.sare.org), call 301-504-6425, or send e-mail to [san@nal.usda.gov](mailto:san@nal.usda.gov).



IANR photo



# 1999 Reflections

The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenges and controversy.

—Martin Luther King, Jr.



Brett Hampton



High school student and FFA member James Harlow experiments with rotational cutting of habitat to provide a constant source of nectar to enhance quantity and quality of honey produced on his family's Exeter, Missouri farm. (FNC 98-212)



**T**he final year of the 20<sup>th</sup> century presented anything but comfort and convenience to most farm families. But through economic challenges and political controversies, many farmers and ranchers chose to stand by their commitment to alternative food systems that reverse negative trends — bringing profit back to the farm, reviving communities, and enhancing the environment. As reflected in this report, the North Central Region (NCR) SARE program charged ahead in 1999 to support farmers, researchers, educators, and others seeking sustainable agricultural solutions.

If you've received past NCR SARE Annual Reports, you'll note a change this year. We took your suggestions to create a user-friendly, useful report. The goal of this report is to provide an overview of our 1999 activities, as well as specific directions on getting more details. We hope you especially enjoy the many images portaying people and places involved in NCR SARE.

This report includes information on:

- Grant projects active in 1999
- Information products resulting from grants
- Resources from SARE
- Applying for SARE grants
- Using SARE's online database of projects
- SARE leaders and contacts

## 1999 Program Activities

In a troubled year, NCR SARE seized on opportunities and the energy of our farming community to meet our goals.

**We boosted our Professional Development Program (PDP).** After a competitive search, NCR SARE's Administrative Council appointed Paula Ford to the post of regional PDP coordinator in April 1999. Ford brings a diverse set of skills and knowledge to the position from more than a decade of professional experience in sustainable agriculture and food systems. Her charge is to facilitate communication among the NCR SARE state sustainable agriculture coordinators in order to improve sustainable agriculture education region-wide. (See page 64.)

**We hosted a regional conference.** As producers adopt alternative marketing strategies and participate in local food systems, NCR SARE supports value-added ventures. We have not only funded nearly 50 marketing grants, but we also sponsored a regional marketing conference. (See page 10.)

**We began an on-going evaluation process.** SARE's visionary Administrative Council identified the need to reflect on our progress and set outcome-based goals. They developed plans for a comprehensive, long-term evaluation of NCR SARE, which would track effectiveness of our activities. The evaluation framework comes on the heels of the 1998 evaluation of our ever-popular Producer Grant Program. In 1999, the Council's Producer Grant Survey Committee studied survey results and recommended changes, such as increasing efforts to transfer information from producer grants to other farmers and ranchers.

**We began efforts to integrate our grant programs.** A Council committee explored strategies to foster more partnerships between farmers, researchers, educators, and representatives of the nonprofit and agribusiness sectors. Look for pilot activities in 2000 that will enhance communication and networking across grant programs.

**We supported nontraditional audiences.** NCR SARE involved diverse participants, such as the Native American communities on the Rosebud Indian Reservation and a community of African American farmers in Illinois. Grants to these groups helped project coordinators produce and market pastured poultry and develop youth-centered gardening and agroforestry projects. Ann Krush, coordinator of a project on the Rosebud Reservation, said, "In our communities, people of all ages watched and gradually joined in activities of gardening and gathering and eating fresh food. Many elders were uplifted to see the youth active in the community, and these two groups began to rebuild important relationships."

**We funded more than 80 projects.** The century's final year added 69 new grant awards in three NCR SARE grant programs, plus grants to 13 state land-grant university sustainable agriculture programs, for a total of nearly \$2.1 million. Funds were divided into the following programs:



• **Research and Education Grant Program** — These grants are awarded to collaborative teams of scientists, educators, producers, and others exploring sustainable agriculture. In 1999, we funded 17 new projects, for a total of \$1.2 million. Nineteen ninety-nine granting priority areas were: Economic, Environmental and Social Impacts of Integrated Crop and Livestock Systems; Assessment of Risks Associated with Sustainable Agriculture; Analysis of Consumer Preferences for and Buying Practices of Sustainable Products; Synthesizing and Communicating Results of Past NCR SARE Project Results; and Emerging Issues. (See pages 26 through 63.)

• **Professional Development Program (PDP)** — Projects are conducted by teams of educators endeavoring to teach Extension and Natural Resources Conservation Service personnel, as well as other information multipliers, about sustainable agriculture. In 1999, we awarded nine new PDP projects, for a total of about \$470,000. (See pages 64 through 83.)

• **State Sustainable Agriculture Programs** — Each year, state sustainable agriculture coordinators at 13 North Central land-grant universities receive funds for sustainable agriculture educational programming. In 1999, we awarded each land grant \$12,000, for a total of \$156,000. For a summary of 1999 state activities, please see [www.sare.org/san/ncrsare/pdp.htm](http://www.sare.org/san/ncrsare/pdp.htm)

• **Producer Grant Program** — These funds go to farmers and ranchers for on-farm research, demonstration, and education projects. In 1999, 43 new producers and producer groups received grants, for a total of more than \$265,000. The USDA's National Agroforestry Center contributed funding for agroforestry projects. (See pages 84 through 109.)

**We shared practical knowledge.** NCR SARE increased efforts to transfer information gained from grant awards to farmers, educators, scientists, and other "end-users" of SARE research. We continue to publish our quarterly newsletter —

*Field Notes*, which highlights information from funded projects. We beefed up the NCR SARE website to include calls for proposals and the latest news, as well as state-by-state information, lists of resources and links, and a calendar of events. See [www.sare.org/ncrsare](http://www.sare.org/ncrsare). And we offered Speakers Bureau grants and free use of our traveling display.

**We sponsored a sustainable agriculture seminar series.**

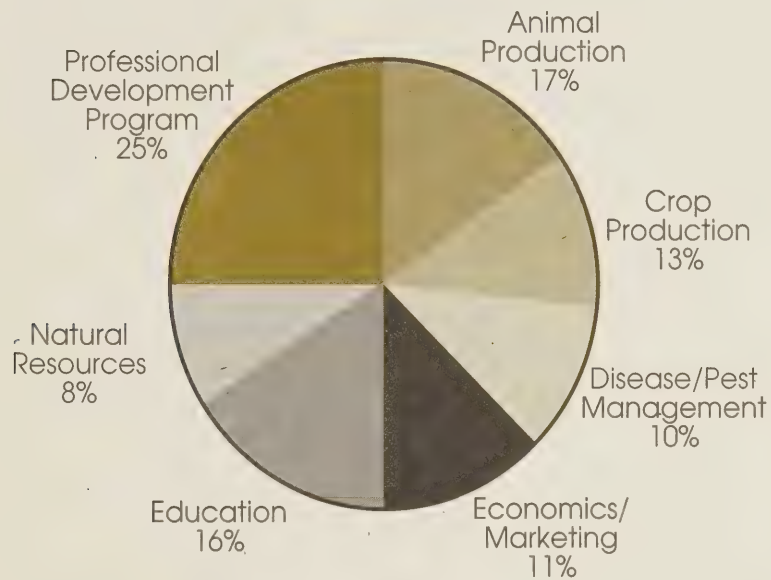
At the end of 1998 and early 1999, NCR SARE co-sponsored two sustainable agriculture seminar series — *Small Farming Systems for the Midwest* and *Reintegrating Agriculture and Community in the Midwest*. SARE grant recipients came from across the region to Lincoln, Nebraska, where they offered their success stories pursuing local, sustainable strategies. Proceedings and videotapes of each seminar are available. (See page 114.)

**We published useful, user-friendly information products.** SARE's national office and the Sustainable Agriculture Network (SAN) — SARE's outreach arm — produced high-quality informational products in 1999. Topical tip sheets on everything from soil quality to value-added marketing show-case valuable resources. SAN also published three new bulletins: *Marketing Strategies for Farmers and Ranchers*, *How to Conduct Research on Your Farm or Ranch* and *Diversify Crops to Boost Profits and Stewardship*. The SAN Committee, which is composed of farmers, educators, and others from across the country who help develop information products, benefitted from the addition of three North Central region constituents: Bill Wilcke from the University of Minnesota, Molly Bartlett from Silver Creek Farm in Ohio, and farmer Tom Larson from Nebraska.

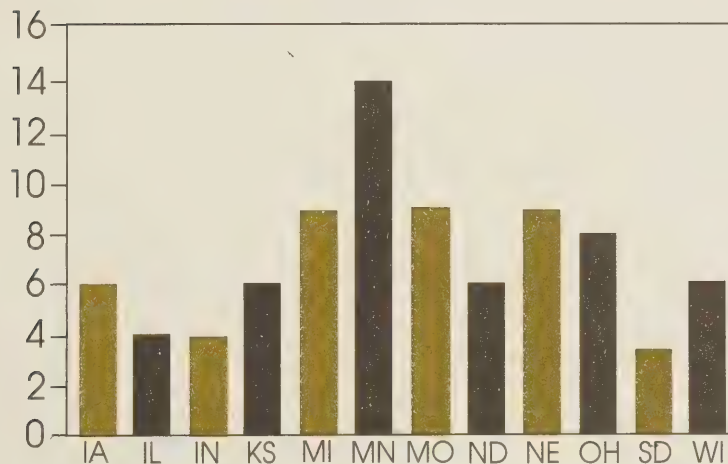
Through 1999's losses and gains, comfort and challenges, we thrived on your support. Thank you for standing with us through adversity and victories. We look forward to positive partnerships for progress toward sustainability in 2000 and beyond.



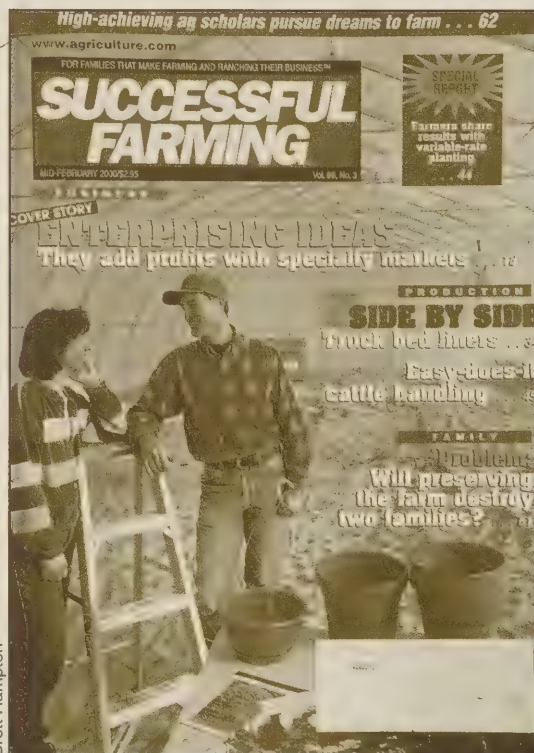
## 1999 Funded Projects by Category



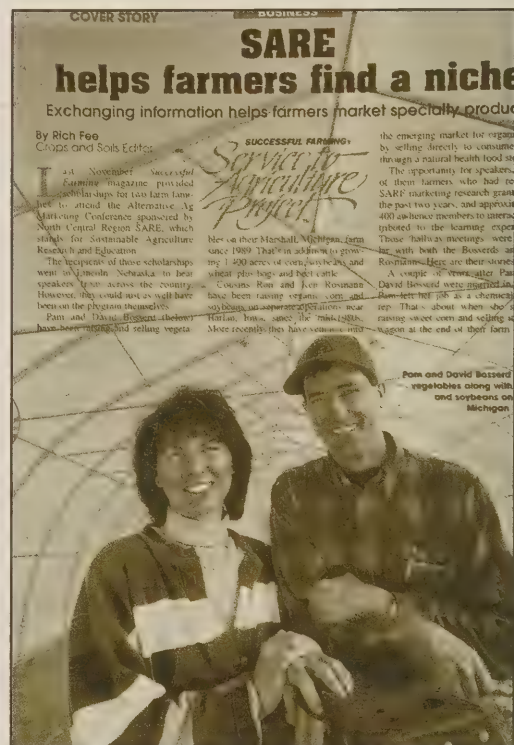
## 1999 # Funded Projects by State



# Value added at 1999 marketing conference



Brett Hampton



Successful Farming magazine featured a cover story highlighting the NCR SARE marketing conference and showcasing direct marketing efforts of Pam and David Bosserd – conference attendees and SARE grant recipients.



Five years ago NCR SARE's Administrative Council prioritized direct marketing as a profitable alternative for producers. The Council's Marketing Committee work culminated in a November 1999 regional conference — *Alternative Agricultural Marketing: Developing Skills for the New Millennium*. We met the conference goals: to help regional farmers and ranchers develop skills and supportive relationships for successful marketing ventures and to help make more direct connections between “farm gates and dinner plates” in the North Central region.

“In my seven years in Extension, this was the best conference that I have attended,” said a participant from Michigan. “What drove the point home were the experts ... stewards of the land. These farmers had a keen sense of listening to the consumer and developing products that sell.”

About 375 people — farmers, nonprofit group representatives, university researchers, students, retail food managers, and many others — congregated in Lincoln, Nebraska, to learn from farmer experts. Participants took home practical information and met valuable contacts. Exhibitors and speakers in 15 workshops introduced innovative ideas — from processing and marketing free-range poultry and educating consumers about agriculture to developing relationships with chefs, processors, and supermarket managers. Each participant received a conference notebook and the *Legal Guide for Direct Farm Marketing*, a book published with NCR SARE funds by agricultural law professor Neil Hamilton.

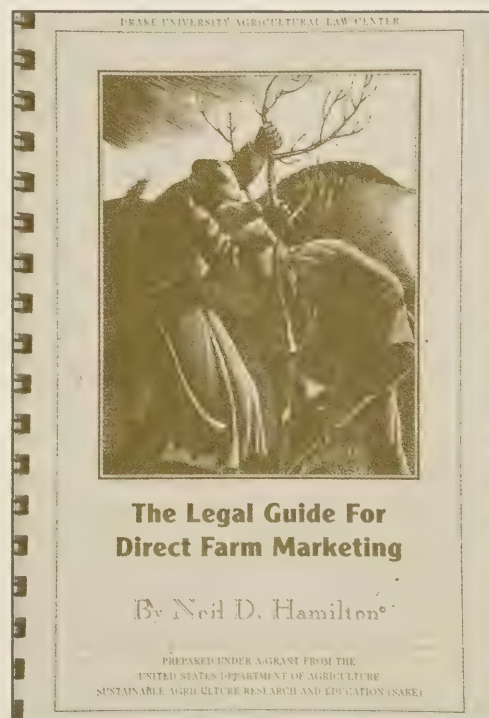
Conference meals featured local foods, such as farm fresh Nebraska chicken, All Natural Beef from a Kansas Co-op and Nebraska salad greens, squash, and potatoes. After the locally grown supper, participants were entertained by Kansas folk singer Ann Zimmerman.

In conference evaluations, participants rated the meeting a 4.4 out of 5, both in terms of its usefulness and opportunities it provided for networking.

We thank all conference participants, exhibitors, speakers, growers of the local meals, and the conference Planning Committee: John Allen, Molly Bartlett, Jim Goodman, Mary Hanks, Ron Macher, Jerry Jost, and Fred Madison.

We're grateful for the generous support of conference co-sponsors: Center for Sustainable Agricultural Systems (University of Nebraska), Fort Berthold Community College, Kansas Rural Center, Land Stewardship Project, Leopold Center for Sustainable Agriculture (Iowa State University), Michael Fields Agricultural Institute, Midwest Sustainable Agriculture Working Group, National SARE Program, Nebraska Cooperative Development Center, Nebraska Sustainable Agriculture Society, North Central Regional Center for Rural Development, *Successful Farming* magazine, and sustainable agriculture Professional Development Programs at 13 North Central land-grant universities.

For more information about direct marketing, see [www.sare.org/san/ncrsare/marketing.htm](http://www.sare.org/san/ncrsare/marketing.htm).



Brett Hampton





# *leadership*

## REFLECTIONS

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**N**CR SARE is governed by a diverse group of agricultural stakeholders. Our **Administrative Council**, composed of leaders from universities, nonprofit groups, farms and ranches, agribusinesses, and agricultural agencies, meets three times each year to set goals and award grants. A **Technical Committee** reviews Research and Education Grant proposals and makes funding recommendations to the Council. **Professional Development Program State Sustainable Agriculture Coordinators** steer state-specific strategies to educate educators. Lists of these regional leaders follow.

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## Administrative Council

Jack Orts titled his Oriska, North Dakota project "Don't Take Grass for Granted." He is developing a management-intensive grazing system for the production of grass-fed beef and enhancement of wildlife habitat. (FNC 98-229)



At Chalet Debonne Vineyards in Madison, Ohio, Gene Sigel demonstrates that intensive tile drainage combined with new hybrid grape varieties can increase net income over traditional concord grape farming. The project will compare growth, yield, and winter hardiness of plants at different tile spacing. (FNC 98-241)



REFLECTIONS

## Administrative Council

### In Memoriam

**I**n February 2000, we lost a member of our Administrative Council. John Hirzel, of Hirzel Canning Company and Farms in Luckey, Ohio, died after a battle with cancer. John served two years on the NCR SARE Council, representing farmers in Ohio and across the region. Strongly committed to a family business started by his great grandfather, John grew organic vegetables on a large scale for 20 years. His commitment to sustainable agriculture and family farming will not be forgotten and his presence at the NCR SARE Administrative Council table will be missed.



*To provide the physically challenged accessibility to You-Pick blueberries and hunting areas, Thomas Robinson will build a boardwalk providing wheelchair accessibility on his Middleville, Michigan farm. He invites the public to his farm for educational and marketing purposes. (FNC 98-213)*



IANR photo



## *Regional Representatives*

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Odie Swanegan  
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Ohio



## Technical Committee

### REFLECTIONS

To convert his freshwater spring into a productive and profitable aquaculture enterprise, Mike Rahe, of Jacksonville, Illinois, constructed dams and stocked trout and small mouth bass. The fish will be used for the commercial market and to accommodate tourists and fee hunters. (FNC 98-235)



Donald Struxness dubbed his project "Keep the Cows in the Corn Even During the Winter Storms." On his Milan, Minnesota farm, he constructed shelterbelts and windbreaks and devised a watering system using underground water lines with buried risers (pictured) and portable fountains. (FNC 98-210)



## *Professional Development Program state sustainable agriculture coordinators*



IANR photo

### **Professional Development Program State Sustainable Agriculture Coordinators**

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### REFLECTIONS



IANR photo

David McCartney found cost savings using technology developed in New Zealand to harvest and store silage on his Coleman, Michigan dairy farm. With this technology, small producers can reduce capital investment and lower operational costs while harvesting in a single trip. (FNC 98-240)





# *competitive grants*

## REFLECTIONS

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## *Research and Education Grant Program*



*In Hopkins Park, Illinois, John and Ida Thurman compared economics and labor of free-range versus pastured poultry systems. Farm Service Agency director Merrill Marxman assisted the couple. This project received special NCR SARE Diversity Enhancement funding. (DNC 98-05)*



IANR photo

In 1999, NCR SARE awarded the 12<sup>th</sup> round of Research and Education Grants. Collaborative teams of scientists, educators, agencies, nonprofit groups, farmers, and others conduct Research and Education projects that examine a broad spectrum of sustainable agriculture issues – from managing parasitic mites on honey bees to direct marketing organic beef.

Research and Education Grant project coordinators carry out multi-disciplinary, multi-professional projects that focus on farm profitability and meaningful producer participation. Projects have holistic goals, measurable end results, and innovative outreach components.

We call for Research and Education preproposals each July. Preproposals are reviewed by our Administrative Council. The Council invites full proposals for review by our Technical Committee. Project funding is usually available in early fall. Individual Research and Education Grant awards range from \$10,000 to \$100,000 for two-year projects. Nearly all projects contribute significant matching funds. We fund about 15 projects at a total of nearly \$1.2 million each year.

The following Research and Education grants, arranged by project category, were active in 1999. Each entry includes the project title, project number, duration, funding, and project coordinator. For more information, contact the project coordinator or request full reports from the NCR SARE office. Some projects have developed information products that can be ordered, as listed.

## Research and Education Grants

### *Animal Production*

**NEW** — *Native Perennial Legumes: New Species for Grazing Systems* (LNC 99-155)

**Duration:** July 1999 - July 2001

**SARE Funding:** \$100,000

**Project Coordinator:** Nancy Ehlke, University of Minnesota, 612-625-1791, 612-625-1268 (fax), ehlke001@tc.umn.edu

This project will be a two-state effort to reintroduce two native plants — false indigo and Illinois bundleflower — into grazing systems. Objectives include evaluating establishment and persistence of the these perennial legumes using a research and education network and initiating two breeding programs. These experiments will provide further information about yield and forage quality of the legumes when grown in diverse pasture environments. The project team will evaluate the potential for agronomic improvement of these species through plant breeding.

**NEW** — *Optimum Genetic Selection of Cattle for Pasture-Based Dairies* (LNC 99-154)

**Duration:** July 1999 - July 2001

**SARE Funding:** \$55,881

**Project Coordinator:** Michael Schutz, Purdue University, Indiana, 765-494-9478, 765-494-9347 (fax), mschutz@purdue.edu

The project team will determine genetic differences among U.S. dairy sires as measured by the ability of their daughters to produce milk and reproduce efficiently in pasture-based versus confinement dairy systems. Theoretically, such differences result from interactions between genotypes and environments. The project team will test for the existence of genotype-by-environment interactions in both systems; identify different management factors that contribute to genotype-by-environment interactions; and educate pasture-based dairy producers about implications of genotype-by-environment interactions on their sire selection goals and decisions. This work will determine whether the genetic evaluations as currently published are adequate predictors of genetic ability of cows to perform in pasture-based systems.

**NEW** — *Using Alternative Forages on Traditional Small Grain Cropland in Rotational Grazing Systems for the Northern Great Plains (LNC 99-153)*

**Duration:** July 1999 - July 2001

**SARE Funding:** \$36,670

**Project Coordinator:** Woodrow Poland, North Dakota State University, 701-483-2348, 701-483-2073 (fax), wpoland@ndsuxext.nodak.edu

This project will test production of and yearling heifer performance from forages produced on traditional small grain cropland in the Northern Great Plains. The team will determine if economic returns to cropland from growing forages and grazing cattle are competitive with returns from small grain production. Forage treatments will include foxtail millet, sweetclover, alfalfa, barley, field pea, and combinations. Yearling beef heifers will graze the forage. Forage samples will determine dry matter available for grazing, rate of dry matter disappearance, and chemical composition. Animal weights will be used to calculate average daily performance and total live weight production during the grazing period.

**NEW** — *A Comprehensive Educational Program to Teach Farmers and other Agricultural Professionals How to Produce and Market Free-Range Poultry (LNC 99-147)*

**Duration:** July 1999 - July 2000

**SARE Funding:** \$60,500

**Project Coordinator:** Linda Lee, Locust Grove Farms/Resilience Inc., Ohio, 740-596-4379, 740-596-3079 (fax)

This project will train farmers and their supporting agency personnel to produce and market high-value products from free-range poultry enterprises. Eight seminars will be conducted in the North Central region. Three participatory workshops will be held at Locust Grove Farms in southern Ohio. In each three-day workshop, students will participate in both field and classroom experiences. All seminar participants will receive a copy of the video and the manual, *Free-Range Poultry Production and Marketing*, plus a one-year subscription to the journal, *Free-Range Poultry Forum*. The project team will send these products to every state Extension office throughout the North Central region and to one sustainable agricultural organization in each of the 12 states.

#### **Information Products:**

*Free-Range Poultry Production*. Resilience, Inc., 1999. Video-tape, \$25 plus \$2.50 S/H.

*Free-Range Poultry Production and Marketing*. Resilience, Inc., 1998. Manual, \$44 (\$55 for video and manual).

*Free-Range Poultry Forum*. Resilience, Inc. Quarterly journal, \$25/year, \$45/2 years.

Contact Resilience, Inc./Back Forty Books, 740-596-4379.

*Perennial Legumes for Sustainable Pasture Systems (LNC 98-134)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$99,800

**Project Coordinator:** Craig Sheaffer, University of Minnesota, 612-625-7224, 612-625-1268 (fax), sheaf001@maroon.tc.umn.edu

The objectives for this project are to develop alternative strategies for establishment of kura clover and birdsfoot trefoil and to develop a new kura clover variety through plant breeding. Field trials took place in Minnesota, Michigan, and Wisconsin, with varied success. Please request a full report for detailed results.

#### **Full Report Available**

*Evaluating Pasture-Based Poultry Systems: Potential Contributions to Farm Diversification, Human Nutrition, and Marketing Alternatives (LNC 97-121)*

**Duration:** July 1997 - June 2000

**SARE Funding:** \$89,348

**Project Coordinator:** George Stevenson, University of Wisconsin Center for Integrated Agricultural Systems, 608-262-5202, 608-265-3020 (fax), stevenson@aae.wisc.edu

This project joins university scientists with farmers and other professionals in a participatory approach to evaluate socioeconomic and human nutrition dimensions associated with pastured poultry systems on small and medium diversified



## Research and education grants

*In New Salem, Illinois, Marchell Baehr works with his local Resource Conservation and Development District and the University of Illinois to test new varieties of grapes. Local interest in vineyards has grown. (FNC 98-237)*



*Pam Bosserd directed a project to transition from a traditional grain and livestock farm to an on-farm produce market in Marshall, Michigan. High quality fruits and vegetables partnered with educational programs help her to connect parents and children to their food supply. The urban-rural bond benefits both producers and consumers. (FNC 98-204)*



REFLECTIONS

## *Research and education grants*



IANR photo



*In Brixey, Missouri, Lavinia McKinney organically grows and markets Chinese and indigenous medicinal plants on Elixir Farm. Production costs are high, but profits can be substantial. (FNC 98-215)*

farms. Five farms in Wisconsin and Minnesota will serve as case studies. Economic analysis will assess profitability and capital requirements for the whole-farm system and the pastured poultry enterprise. For the quality of life analysis, farmers kept labor logs. Individual interviews on quality of life issues were also conducted. Evaluation began on human nutrition claims, with emphasis placed on fat, cholesterol, texture, flavor, and microbiological analyses. The team is also exploring processing and regulatory components of the marketing infrastructure.

### **Full Report Available**

#### **Information Product:**

*Pastured Poultry Study Addresses Broad Range of Issues.* Center for Integrated Agricultural Systems (CIAS), January 1999. Research brief, free. Contact CIAS, 608-262-5200.

*Improving Sustainability of Cow/Calf Operations with Natural Forage Systems (LNC 97-119)*

**Duration:** July 1997 - December 1999

**SARE Funding:** \$81,000

**Project Coordinator:** Don Adams, University of Nebraska, 308-532-3611, 308-532-3823 (fax), dcadams@unlnotes.unl.edu

The objective was to determine if labor and purchased inputs could be reduced, and sustainability improved, by matching calving and weaning with nutrient content of grazed forages and/or by extending the grazing season in beef cow/calf systems. Cows were calved beginning March 15 or June 15. The June calving date matched the high nutrient lactation requirements of the cow with high nutrient content of immature growing plants. Calves were weaned at the same age in October and January for March and June calving systems, respectively. A second portion of the project is using weaning date as a means to match nutrient requirements of lactation with forage nutrients in a March calving system. Key results suggest that by adjusting calving date, nearly 2,000 pounds of harvested feed was replaced by grazing, and net returns were increased about \$80 and \$70 per head for steer and heifer calves born in June compared to those born in March.

### **Full Report Available**

*Maximizing Forage and Minimizing Grain Intake in Bison Fed for Meat (LNC 97-113)*

**Duration:** July 1997 - January 2000

**SARE Funding:** \$78,360

**Project Coordinator:** Vernon Anderson, North Dakota State University, 701-652-2951, 701-652-2055 (fax), vanderso@badlands.nodak.edu

This trial was designed to determine if extending the forage feeding period for fed bison would alter performance of the animals, cost of production, or final meat product. Four treatments were used with nine participating producers conducting one comparison on each farm for a balanced statistical treatment. A significant finding of this project is that extending the forage feeding period in bison bulls decreases the number of days required to feed grain and increases average daily gain during the grain feeding period. This finding is very predictable, but substantial information remains to be gleaned from the producer-generated data. All of the producer-conducted trials have been completed; however, data must be analyzed and interpreted.

### **Full Report Available**

#### **Crop Production**

*NEW — Integrating Organic Soybean Production Following Conservation Reserve Program Land into Sustainable Farming Systems (LNC 99-160)*

**Duration:** July 1999 - July 2001

**SARE Funding:** \$55,500

**Project Coordinator:** Kathleen Delate, Iowa State University, 515-294-7069, 515-294-0730 (fax), kdelate@iastate.edu

Several factors will impact the success of an organic farming operation on Conservation Reserve Program (CRP) land, including tillage practices, the use of cover crops, weed management, and proper crop rotations. This project will examine these factors in replicated trials, both on-farm and at an Iowa State University experiment station. Objectives include: establish plots dedicated to organic farming research on CRP land; implement production and management regimes for opening CRP land and for weed control on conventional and organic systems on CRP land; evaluate the biological and economic outcomes of the different systems; and share information with farmers and agricultural professionals.



**NEW** — *Strategies for Conversion to Organic Production Systems* (LNC 99-149)

**Duration:** July 1999 - July 2001

**SARE Funding:** \$96,472

**Project Coordinator:** Elizabeth Dyck, University of Minnesota, 507-752-7372, 507-752-7374 (fax), dyckx002@tc.umn.edu

This project will help farmers get information to make a successful conversion to organic production. The project team will develop a network of farmers committed to research on conversion to organic production; design and test organic conversion strategies and monitor their effect on the agro-economic, economic, and social components of the farming system; and develop and disseminate a manual outlining successful strategies for conversion. Farmers wishing to convert to organic production will collaborate with researchers and growers to design and implement an on-farm trial. The project team will also identify the conversion strategy best suited to individual farming systems.

*Soil Quality Improvement with Cover Crop Mixtures* (LNC 98-140)

**Duration:** August 1998 - July 2000

**SARE Funding:** \$93,256

**Project Coordinator:** Eileen Kladvik, Purdue University, Indiana, 765-494-6372, 765-496-2926 (fax), kladvik@purdue.edu

The project team is using cover crop mixtures to improve soil quality and diversify the corn-soybean cropping system in the eastern Corn Belt. They will evaluate the effect of cover crop mixtures on soil structure, microbial community structure, nutrient conservation and availability, yields, and weed suppression. Experiments were conducted at Purdue University that represent four soil types managed in no-till and conventional tillage systems. Three producers' fields were used to demonstrate cover mixtures and resulting soil quality changes. The team hypothesizes that cover crop mixtures will show more improvement in soil quality, as indicated by chemical, physical, and biological measures, than will a single cover crop. This could result in improved growth and yield of cash crops.

**Full Report Available**

*Innovative Tart Cherry Orchard Systems: Design, Evaluation, and Demonstration* (LNC 98-139)

**Duration:** August 1998 - July 2000

**SARE Funding:** \$75,000

**Project Coordinator:** Charles Edson, Michigan State University, 517-353-5134, 517-353-4995 (fax), edsonc@msu.edu

The goal of this project is to design, evaluate, and demonstrate innovative orchard systems for tart cherry production that reduce environmental impact and sustain the economic viability of fruit growers and communities. The Michigan Cherry Industry and the Michigan Department of Agriculture provided seed money for the establishment of an experimental orchard designed in consultation with a farmer-industry-researcher stewardship group. The experiment compares two alternative management systems, Alternative Insect Management (AIM) and Permaculture (PER), with a conventional Integrated Pest Management (IPM) system. In 1999, all groundcover, fertilization, and tree-crop treatments were in place, and the focus was on obtaining tree physiology, soil quality, and groundcover data.

**Full Report Available**

*Annual Forages for Integrated Crop and Livestock Systems* (LNC 98-135)

**Duration:** August 1998 - July 2000

**SARE Funding:** \$52,000

**Project Coordinator:** Burt Weichenthal, University of Nebraska, 308-632-1253, 308-632-1365 (fax), bweichenthal1@unl.edu

The objectives for this project are to develop a two-year database on production and quality characteristics of fall- and spring-seeded cereal forages, summer annual forages, and annual legumes; and determine the protein degradability of forages in the rumen for use in the new National Research Council metabolizable protein system for beef cattle. Trials were repeated for two years in a single-cut harvest system for dryland and irrigated forage crops. When water from irrigation or rainfall is adequate, the preferred management system for cultivars with good regrowth capability is to graze or harvest twice for feed higher in protein and available energy, as well as reduced chances for lodging. Quality data from lab tests will be provided for 1999 cultivars, including nitrate levels.

**Full Report Available**

## Research and education grants

*On the Rosebud Sioux Reservation in South Dakota, Ann Krush educates tribal youth interns about growing and gathering their own food. Children sell garden products to tribal members who can use USDA WIC coupons to buy their vegetables. This project received special NCR SARE Diversity Enhancement funding. (DNC 98-04)*



REFLECTIONS

IANR photo

## *Research and education grants*



IANR photo



*As Varroa mites develop resistance to apistan, Kathy Hawthorne is experimenting with a combination of formic acid and apistan strips for mite control. On her Rayville, Missouri farm, she found somewhat better mite control with the formic treatment and little difference in honey production between hives treated with formic acid and those treated only with apistan. (FNC 98-230)*



*Feasibility of Agroforestry System using Management-Intensive Grazing in Eastern Black Walnut Plantation (LNC 98-125)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$48,487

**Project Coordinator:** Sandra Hodge, University of Missouri, 573-884-6729, 573-882-1977 (fax), [HodgeS@missouri.edu](mailto:HodgeS@missouri.edu)

The objective of this project is to determine the effects on both trees and forage when cattle are rapidly rotated through a series of small paddocks using a management-intensive grazing system in a black walnut plantation. In April 1999, 26 head of 575-pound steers were placed on 20 acres of pasture divided into 16 paddocks. Preliminary observations indicate that trees at least 10 feet tall will not be adversely affected by browsing to the 6-foot height, since this would be a normal level for pruning. Experience with use of the electric polywire indicates that smaller trees can be protected by running a temporary fence down each side of the tree row. First-year results are promising for this agroforestry system that will allow cash flow from cattle grazing during the establishment years of the plantation.

**Full Report Available**

*Using Small Grain Cover Crop Alternatives to Diversify Crop Rotations (LNC 97-116)*

**Duration:** July 1997 - July 2000

**SARE Funding:** \$92,300

**Project Coordinator:** Joshua Posner, University of Wisconsin, 608-262-0876, 608-262-5217 (fax), [jposner@facstaff.wisc.edu](mailto:jposner@facstaff.wisc.edu)

The goal of this project is to increase the sustainability of Midwestern farming systems by diversifying the corn-soybean rotation. The project team is re-introducing small grains, planted with a legume cover crop, into the rotation. They built a unique outreach team that joins producers, university agronomists and extension agents, non-governmental organizations, and the food processing industry. Production and economic data is being collected and analyzed from 27 Midwestern farms. The team is also providing market contracts for production of high-quality, food-grade grain for food industry processors and grain handlers.

**Full Report Available**

**Information Products:**

*Farmers Guide and Resource to Quality Small Grains Production.* R.G. Doetch, D. Kane, J. Stute, J. Posner and T. Ends. Technical handbook, free.

*Small Grains Update.* Newsletter published approx. 6 times/year, free.

Contact Tony Ends, 262-642-3303 or [tends@mfai.org](mailto:tends@mfai.org)

*Enhancing Adoption of Sustainable Agriculture Practices via Farmer-Driven Research (LNC 97-112)*

**Duration:** July 1997 - April 2000

**SARE Funding:** \$100,405

**Project Coordinator:** Dale Mutch, Michigan State University Kellogg Biological Station, 616-671-2412, 616-671-4485 (fax), [mutchd@msue.msu.edu](mailto:mutchd@msue.msu.edu)

The project goal is to develop a research agenda that directly addresses farmer needs, encourages collaboration among farmers and researchers, and provides a forum where farmers can learn from other farmers. Farmers, researchers, and Extension personnel participated in research design teams, which identified the farmers' greatest perceived research needs — weed management from a whole-systems perspective, soil quality, and a whole-systems approach to research. The design teams developed protocols for a long-term cropping system comparison to investigate changes during transition to organic and low-input field crop systems. They are measuring aspects of soil quality and soil biology and assessing the economic viability of rotations. The project team will organize study circles to discuss needs of sustainable farms and communities and find ways to make those needs a more prominent part of land-grant university research agenda.

**Full Report Available**

*Farmer-Designed Research on the use of Legumes in Sustainable Dryland Cropping Systems (LNC 97-104)*

**Duration:** July 1997 - July 2000

**SARE Funding:** \$91,000

**Project Coordinator:** David Baltensperger, University of Nebraska, 308-632-1230, 308-632-1365 (fax), dbaltensperger1@unl.edu

This project is developing a model of farmer-collaborator participation in research by actively involving farmers in determining on-farm research objectives and approach. The project team formed a farmer steering committee to explore legumes in dryland cropping systems. Trials have been conducted on four farms, representing a range of soil and climatic conditions. Austrian winter peas were studied for effect on soil organic matter, wind erosion, and weed control. Though the pea may not immediately increase wheat yield, the project team expects to see long-term benefits of additional organic matter. Soil microbiological data has been collected from the wheat fields, and it appears that activity is increased following peas. The major impact of this project, regardless of research results, has been to increase farmers' knowledge of on-farm research with minimal assistance from extension and research personnel.

**Full Report Available**

*Disease and Pest Management*

**NEW** — *A Sustainable Approach to Controlling Varroa Mites of Honey Bees (LNC 99-152.1, see also LNC 97-117)*

**Duration:** July 1999 - July 2001

**SARE Funding:** \$86,286

**Project Coordinator:** Marla Spivak, University of Minnesota, 612-624-4798, 612-625-5299 (fax), spiva001@tc.umn.edu

The goal of this research is to breed for mite resistant honey bee stock and transfer the breeding technology to queen producers in the U.S. so they can breed for resistance to *Varroa* mites from among their own lines. The experiments rely on collaboration and feedback from beekeepers in the North Central region. The project team expects to reduce the use of conventional pesticides to control *Varroa* mite pests of honey bees by breeding mite-resistant bees. By using the

resistant line of bees in migratory and non-migratory beekeeping operations, the team anticipates that beekeepers will be able to either eliminate or limit the use of conventional pesticides by using alternative treatments that do not pose the risk of the mites developing resistance to the compounds.

**NEW** — *Development of Sustainable Practices for Integrated Management of Apple Diseases (LNC 99-150.1, see also LNC 97-124)*

**Duration:** July 1999 - July 2001

**SARE Funding:** \$94,772

**Project Coordinator:** John Andrews, University of Wisconsin, 608-262-0928, 608-263-2626 (fax), jha@plantpath.wisc.edu

The project team will develop key components of a biologically based program to control the major fruit and foliar diseases of apple in the northern U.S. The long-term goal is to integrate the best of these methods to achieve an additive or synergistic effect. This strategy would break continuing reliance on fungicides by conventional orchardists and provide a reliable, non-pesticide, low-input and low-cost framework for organic growers. Researchers from the University of Wisconsin departments of pathology, agronomy, and pomology, as well as orchardists and a mushroom farmer, will collaborate on these specific objectives: using a novel orchard floor cover crop to break the life cycle of the apple scab pathogen, which overwinters in apple leaf litter; and using environmentally benign compounds applied to apple trees to control scab and the sooty blotch/flyspeck disease complex.

*Biological Control of Bacterial Diseases of Vegetable Crops (LNC 98-141)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$98,000

**Project Coordinator:** Sally Miller, Ohio State University, 330-263-3678, 330-263-3841 (fax), miller.769@osu.edu

To control bacterial diseases in vegetable crops, project coordinators are studying production of healthy transplants with negligible bacterial pathogen loads, followed by field applications of biological control agents or low-risk synthetic compounds in an integrated disease management program. The team has shown previously that bacterial diseases are

## Research and education grants

Using a mobile meat market called the "Goosemobile," Canistota, South Dakota farmer Tom Neuberger sells poultry, beef, pork, lamb, bison, goat, and ostrich to satisfied customers in southeast South Dakota. (FNC 98-216)



REFLECTIONS

IANR photo



## *Research and education grants*



IANR photo



*Denise Dailey found asparagus, lettuce, greens, and cut flowers to be viable alternatives to tobacco on her Deputy, Indiana farm. She markets produce to restaurants in Louisville, Kentucky and Columbus, Indiana. (FNC 98-206)*

reduced in seedlings produced in transplant plug mixes containing composted pine bark. This reduction in disease is thought to be the result of the induction of systemic resistance (ISR) by rhizosphere microorganisms in compost used. The team is testing binary inoculants for fungal biocontrol on radish. The most promising combinations will be tested on tomato. Two strains of bacteria that are antagonistic to the bacterial spot pathogen have been identified. These strains, as well as other methods, were evaluated for control of bacterial spot on tomato and peppers in greenhouse and field trials.

#### **Full Report Available**

##### **Information Product:**

*Composting at Home*. F.C. Michel, J.E. Heimlich and H. Hoitink, 1999. Website, see [ohioline.ag.ohio-state.edu/hygfact/1000/1189.html](http://ohioline.ag.ohio-state.edu/hygfact/1000/1189.html)

*Development of Sustainable Practices for Integrated Management of Apple Diseases* (LNC 97-124, see also LNC 99-150.1)

**Duration:** July 1997 - December 1999

**SARE Funding:** \$92,892

**Project Coordinator:** John Andrews, University of Wisconsin, 608-262-0928, 608-263-2626 (fax), [jha@plantpath.wisc.edu](mailto:jha@plantpath.wisc.edu)

The objective is to develop a biologically based program to control the major fungal diseases of apple fruit and foliage in the northern U.S. The team is assessing the ability of an orchard floor cover crop, kura clover, to break the life cycle of the apple scab pathogen, and testing the efficacy of environmentally benign compounds used as sprays to control scab and other important foliar and fruit diseases, such as cedar apple rust and sooty blotch/flyspeck complex. Kura clover takes at least three years to become well developed. At the site where the clover is better established, earthworm activity is greater and there is a trend toward lower scab incidence on potted trees. A decrease in aerial ascospores and scab is expected when a better stand of the clover is established. Combining the clover as a ground cover with the use of the most effective of the experimental sprays should result in effective, non-toxic, and sustainable disease control.

#### **Full Report Available**

*A Sustainable Approach to Controlling Mite Pests of Honey Bees* (LNC 97-117, see also LNC 99-152.1)

**Duration:** July 1997 - December 1999

**SARE Funding:** \$78,750

**Project Coordinator:** Marla Spivak, University of Minnesota, 612-624-4798, 612-625-5299 (fax), [spiva001@tc.umn.edu](mailto:spiva001@tc.umn.edu)

Since 1993, the project coordinator has been breeding honey bees that demonstrate natural mechanisms of defense against the parasitic mite *Varroa jacobsoni*. The goal of this project was to breed bees that could resist *Varroa* and diseases to decrease reliance on pesticides and antibiotic use in bee hives. Project coordinators will transfer breeding program technology to producers. The program has generated promising results. Colonies were bred for hygienic behavior, a defense against mites and diseases in which bees detect and remove mite-infested and diseased brood from the nest, interrupting the mites' reproductive cycle, and mitigating the spread of disease. Hygienic colonies will require fewer treatments for *Varroa* than unselected stocks of bees. Over two summers, the hygienic colonies also demonstrated good resistance to American foulbrood, which would reduce antibiotic use in honey bee colonies.

#### **Full Report Available**

*Combining Landscape and Augmentative Biological Control to Suppress European Corn Borer Populations in Sustainable, Low-Input Systems* (LNC 97-114)

**Duration:** July 1997 - July 2000

**SARE Funding:** \$92,740

**Project Coordinator:** Leslie Lewis, USDA Agricultural Research Service, Iowa State University, 515-294-8614, 515-294-2265 (fax), [leslewis@iastate.edu](mailto:leslewis@iastate.edu)

The project team is using landscape and crop diversity as low-input methods to localize European corn borer (ECB) populations, enhance natural enemies of ECB, reduce the need for chemical insecticides, and provide corn producers with practical pest management strategies. The team will determine which crops and erosion-control plants best stimulate

ECB oviposition and assess ECB control in corn when egg parasitoids are inoculated into moth aggregation sites. Three millet varieties were compared as trap crops for ECB. Field trials assessed preferences between the three types of millet and three growth stages of each. The cage trials compared egg-laying by corn borer moths on the three types of millet and corn. Under optimal conditions, corn and pearly millet plants received the highest numbers of egg masses. Most of the corn borer egg masses laid on the millets were parasitized by released parasitic wasps, but most of the parasitization in corn only occurred within 15 feet of the millet plots.

#### **Full Report Available**

#### ***Economics and Marketing***

**NEW** — *Institutional Markets for Sustainable Agriculture Products* (LNC 99-157)

**Duration:** July 1999 - July 2001

**SARE Funding:** \$61,875

**Project Coordinator:** George Stevenson, University of Wisconsin Center for Integrated Agricultural Systems, 608-262-5202, 608-265-3020 (fax), [stevens@aae.wisc.edu](mailto:stevens@aae.wisc.edu)

This project builds on a nationwide preliminary study of college and university food services and seeks to expand our understanding of the marketing opportunities and barriers present in Wisconsin's institutions of higher education, as representatives of schools in the Upper Midwest. The project will supply sustainable farmers and food manufacturers with marketing research developed from analyses of the preferences, buying practices, and protocols of college and university purchasing officers and food service directors, institutional food service distributors, and consumers of food at one selected public university and one private college. It also seeks to provide these decision-makers with information on the values of local, sustainable agriculture, as well as contacts and strategies to make connections with the sources of locally and sustainably produced food products.

**NEW** — *Economic Analysis and Policy Development to Support Multiple Social, Economic, and Environmental Benefits Produced by Farms* (LNC 99-146)

**Duration:** July 1999 - July 2001

**SARE Funding:** \$92,840

**Project Coordinator:** George Boody, Land Stewardship Project, Minnesota, 651-653-0618, 651-653-0589 (fax), [boody002@gold.tc.umn.edu](mailto:boody002@gold.tc.umn.edu)

The interdisciplinary project team will compare selected net environmental and social benefits from commodity-based and integrated farming systems in two watersheds in Minnesota. They will design a study to measure the economic benefits produced in two Minnesota watersheds by agriculture specializing in cash grains or livestock and integrated farming systems that produce both crops and livestock. The project will evaluate how public and private policies foster the production of multiple economic, social, and environmental benefits. The team will calculate and compare the economic value of benefits from commodity-based production to that of integrated farming systems, looking beyond the economic value of commodities produced on these farms to consider non-market benefits with economic values that can be ascertained.

*Strengthening Links between Meat Producers, Processors, and Consumers* (LNC 98-133)

**Duration:** August 1998 - July 2000

**SARE Funding:** \$6,000

**Project Coordinator:** Jenifer Buckley, Sustainable Farming Association of Northeast Minnesota, 218-727-1414

The objectives of this project are to determine mutual needs of producers and processors in the direct marketing and processing of livestock, develop information materials for consumers on the purchase and processing of local meats, and provide consumer outreach through semi-annual classes on preparation of local meats. The team is putting together a directory of local livestock producers and processors for consumers. Accompanying the directory are informational materials to help consumers understand buying an animal or part of it; having it processed; figuring weight, pricing, and storage space; and other details unfamiliar to many supermarket shoppers. The project team has also reached out to immigrant groups looking for specialty meats and cuts.

#### **Full Report Available**



## *Research and education grants*

*Kevin Green in Fithian, Illinois, controls encroachment of sugar maples in his hardwood forests by using prescribed burning, spot spraying, and girdling of young trees. He markets larger sugar maples for lumber and firewood. (FNC 98-231)*



*A fringed prairie orchid on North Dakota's Sheyenne National Grasslands indicates a healthy and diverse pasture system.*



REFLECTIONS

## *Research and education grants*



Michael Nohner, in Watkins, Minnesota, is establishing a hybrid poplar plantation using mechanical weed control to reduce environmental impact on lands in a waterfowl area. Plans are to harvest trees for pulp in 10 years. (FNC 98-234)



Gary Mensinger evaluates the effectiveness of baling twine to reduce deer damage to young trees on his Camanche, Iowa, agroforestry operation. In initial tests, twine-wrapped trees exhibited considerably less damage than the control trees. (FNC 98-205)

*Producer-Owned Cooperative to Process and Market Sustainably Produced Pork (LNC 98-132)*

**Duration:** August 1998 - September 2000

**SARE Funding:** \$23,590

**Project Coordinator:** Aaron Heley Lehman, Iowa Farmers Union, 800-775-5227, 515-292-6888 (fax)

This project will help farmers establish a cooperative to process and market sustainably produced pork directly to consumers. The Farmers Union and Center for Rural Affairs have provided leadership to a steering committee of farmers. The committee has gathered initial information from wholesalers and retailers, discussed consumer preferences studies, developed producer surveys, and researched possible designs of a cooperative. In addition to developing criteria for membership and products, the committee must further explore opportunities for slaughtering livestock and processing meat. The producers will also perform a market and feasibility analysis.

*Traveling Food Processor/Educational Trailer (LNC 98-131)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$41,138

**Project Coordinator:** Susan Houghton, Michigan Organic Food and Farm Alliance, 810-632-7952, [organic@voyager.net](mailto:organic@voyager.net)

The project goal was changed from selling prepared food at county fairs and other mainstream events to processing in a mobile trailer. The project team has developed and printed a guide of growers; contacted growers and set up on-farm demonstrations to make jam, freeze green beans and strawberries, and make apple pies; and publicized the project. Project leaders had to learn about and comply with regulations regarding weights and measures, advertising, food additives, labeling, rest rooms and hand washing, packaging, testing procedures for contamination, identification codes, handling and storage of processed foods, pricing, and waste water disposal. The team also discovered that they needed packaging machines, freezing equipment, scales, jarring and canning equipment, a water pump, propane tanks, and electricity requirements. Despite the change in direction and challenges involved in processing, the team still believes it will be an economical way for small farmers to find ways of increasing farm income.

**Information Product:**

*Eating Organically: A Guide to Michigan's Organic Food Producers and Related Businesses.* Michigan Organic Food and Farm Alliance (MOFFA) and Michigan State University (MSU) Extension, 1999. Bulletin, \$10 plus \$3.20 S/H. Contact any Michigan county Extension office, or see [www.moffa.org](http://www.moffa.org).

*Educating Consumers about Local, Sustainably Produced Meat (LNC 98-130)*

**Duration:** August 1998 - December 1999

**SARE Funding:** \$23,200

**Project Coordinator:** Margaret Krome, Michael Fields Agricultural Institute, Wisconsin, 414-642-3303, 414-642-4028 (fax)

The goal of this project was to educate consumers in Madison, Wisconsin, about the way meat is produced using sustainable agriculture practices. This project helped eight local farmers make sufficient consumer contacts collectively in a direct marketing group called Healthy Meats! (HM!). During the year, the project team assisted the development of direct markets for local owner-operated farms. The goals were met by generating media articles, conducting consumer events, developing a brochure, and establishing a booth at the Dane County Farmers Market. Ultimately, two of the eight HM! farmers sold out of their inventory by early November. They attribute their success primarily to their presence at the Dane County Farmers Market. While many of the farmers have seen an increase in customers, their success has demanded persistence, patience, and hard work.

*Strengthening Farms on the Edge: Developing Rural/Urban Partnerships (LNC 98-129)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$29,450

**Project Coordinator:** Rebecca Cline, Northeast Ohio Family Farms, 216-464-2618, 216-464-3742 (fax), [leezal50@aol.com](mailto:leezal50@aol.com)

To develop a farm coalition and decrease barriers for small diversified farmers to market their products, Northeast Ohio Family Farms (NOFF) was created to pilot marketing initiatives in northeast Ohio. A needs assessment study of the six NOFF families provided information and recommendations, including the necessity of a non-farmer coordinator. Farm Fest: Farm Appreciation Days was held at Silver Creek Farm to connect



consumers to the source of their food. More than 500 individuals attended Farm Fest throughout the summer to learn about pest management, making goat cheese, and planting a perennial garden, among many other workshops and demonstrations. Surveys of Farm Fest participants indicate that respondents enjoyed themselves, made valuable connections with producers, and learned about important aspects of farming.

#### **Full Report Available**

##### **Information Products:**

*Sustaining Family Farms: Preserving an American Heritage.* Northeast Ohio Family Farms (NOFF), 1999. Videotape, \$20.

*Creating an Outdoor Classroom.* NOFF, 1999. Videotape, \$40.

*A Qualitative Study Regarding Barriers to Farming in Northeast Ohio.* Michelle Smith, 1999. Report, \$1.

Contact Rebecca Cline, 216-464-2618, leeza150@aol.com.

*Congregationally Supported Agriculture (LNC 98-128)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$38,900

**Project Coordinator:** Phillip Arnold, Minnesota Sustainable Farming Association, Central Chapter, 320-732-4398, meaggg@rea-alp.com

This farmer-directed project is developing a marketing and educational partnership between sustainable farmers and customers who seek their products. Members of the Whole-Farm Cooperative are developing a broad customer base, but this particular project targets members of church or synagogue congregations. The team will create a link between a community of sustainable producers and religious communities. They are delivering products to six churches and one convent and working with several others to reach the delivery stage. The team has discovered that the connection with each church must be ongoing and personal to be effective. Activities to help foster this relationship include educational programs about food issues, farm tours, newsletters, and surveys.

#### **Full Report Available**

*County Fair Tomato Cooperative: Developing an Organic Tomato Processing Cooperative (LNC 98-127)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$67,800

**Project Coordinator:** Dan Nagengast, Kansas Rural Center, 913-873-3431, 913-873-3432 (fax)

The project team has canned golden and red tomatoes and developed golden and red salsas using other local farm products. They are also developing a tomato sauce. Label design will follow guidelines supplied by Kansas State University Extension. The team did variety trials and resolved some issues around proper culling, cleaning, and packing. They are in the process of establishing a formal cooperative. Products were sold through community-supported agriculture, to a restaurant, and to a gift shop specializing in Kansas products. Farmers have three possibilities of increasing income: selling tomatoes to the cooperative, working as hourly labor during canning, or taking compensation in processed tomatoes and reselling at retail prices.

#### **Full Report Available**

*Marketing Sustainable and/or Organic Products in Small Metro Areas (LNC 98-126)*

**Duration:** August 1998 - September 2000

**SARE Funding:** \$41,355

**Project Coordinator:** William Nelson, North Dakota State University, 701-231-1016, 701-231-1055 (fax), winelson@plains.nodak.edu

The goal of this project is to increase sales of locally grown organic foods in Fargo-Moorhead, North Dakota, serving as a model for small metropolitan areas in the Midwest. The Northern Plains Sustainable Agriculture Society is coordinating rural farm marketers to fulfill this goal. The project team consulted with the Organic Alliance to develop a marketing, consumer education, and media plan. A consumer survey indicated strong interest in organic and locally grown foods. The team is working with two local grocery chains, supplying managers with point-of-sale materials from the Organic Alliance. The project also helped develop a new farmers market devoted to local organic foods. Labeling and lack of certified growers were temporary obstacles, but the project has increased sales of organic products at grocery stores and at the new organic farmers market.

#### **Full Report Available**

## Research and education grants

*In St. James, Minnesota, Nancy Aspelund diversified her small crop farm with hogs, poultry, apples and plums. Diversification reduces financial risks and environmental impact. (FNC 97-190)*



*A pumpkin patch on Pam Bosserd's farm in Marshall, Michigan attracts consumers and children to the farm and adds value to the Bosserd's enterprise. (FNC 98-204)*



REFLECTIONS

## *Research and education grants*



*Scenery on NCR SARE  
Technical Committee  
member John Oswalt's  
farm in Vicksburg,  
Michigan.*



*To develop organic  
production techniques for  
snap beans in York,  
Nebraska, John Ellis  
established test plots to  
examine the use of ground  
alfalfa, clover for green  
manure, and blood or  
feather meal to supply  
nitrogen. (FNC 98-217)*



*Development of Market Infrastructure to Support Local and Regional Food Systems (LNC 97-122)*

**Duration:** July 1997 - July 1999

**SARE Funding:** \$86,200

**Project Coordinator:** Steve Bonney, Sustainable Earth Inc, Indiana, 765-463-9366, 765-497-0164, sbonney@iquest.net

The project is building food systems in two regions of Indiana. The west central Indiana project focuses on target markets for organic and natural food in Indianapolis and Bloomington. This project has fostered the development of sustainable production practices to supply those markets, facilitated the development of processing capacity, and facilitated the development of networks that link production from several farms to the identified markets. In northeast Indiana, the project helped develop a farmer marketing group named SAFE (Sustainable Agriculture For Everyone). Members are making weekly deliveries to restaurants in Chicago. In September a food fair attracted 150 farmers and consumers for a meal of regional food, education about sustainable agriculture, and a farm tour. The networking that develops around these marketing activities promotes consumer demand for other products.

**Full Report Available**

*Farmer Marketing Information Co-ops (LNC 96-110)*

**Duration:** September 1996 - April 2000

**SARE Funding:** \$22,390

**Project Coordinator:** Jerry Jost, Kansas Rural Center, 785-776-5851, jjost@flinthills.com

The project team is organizing farmer information co-ops for the development of farm-to-town markets. Four information co-ops are organized around pastured chickens, freezer lamb, organic grain, and grass-fed beef. Each co-op will participate in four learning sessions scheduled at their discretion by conference call. A farmer in each co-op will be contracted to coordinate the co-op. Each co-op will also have funds to travel for on-site learning. Direct marketing management bulletins will be developed to transfer the learning from these information co-ops to the broader public.

**Full Report Available**

*Developing Sustainable Hog Markets and Slaughtering Arrangements for Family Farmers in Missouri (LNC 96-105)*

**Duration:** September 1996 - February 1999

**SARE Funding:** \$83,762

**Project Coordinator:** Douglas Constance, (formerly) University of Missouri, 409-294-1514, 409-294-3573 (fax), soc\_dhc@shsu.edu

This project helped develop sustainable hog slaughtering arrangements and markets for family farmers in Missouri. The research team identified and consulted with producers and processors in seven states. They analyzed factors contributing to the success of groups of hog farmers working cooperatively, adding value to their product, and sourcing slaughter markets. They found several examples of farmers in networks to source inputs, gather information, and sell products. A common strategy to gain and maintain better access to slaughter markets was pooling several different producers' hogs in a single potload and providing them on a regular basis. A Missouri group has developed a successful relationship with a small, local packer. This group is now developing its own branded label and has obtained a grant to investigate the feasibility of buying or building an existing small processing plant.

**Full Report Available**

*Obstacles to Market Access for Family Farm Hog Producers (LNC 95-92)*

**Duration:** September 1995 - August 1997 (final report received December 1999)

**SARE Funding:** \$50,180

**Project Coordinator:** Mark Schultz, Land Stewardship Project, Minnesota, 612-722-6377, 612-722-6474 (fax), schul072@gold.tc.umn.edu

The project team explored the pattern of meatpacker policies and practices that results in decreased market access and lower prices for independent hog farmers. Independent hog producers are being reduced to residual suppliers as meatpackers make long-term production contracts with large-scale producers and expand production of finished hogs in their own facilities or in joint ventures with large-scale produc-

ers. Several changes in industry, producer, and government policy and practice are proposed in a report to address the issue of inequitable access and prices. The project found that for a sustainable agriculture to advance in the region beyond the "niche" phase, independent family farm livestock producers must have fair access to markets, both conventional and alternative.

### **Full Report Available**

#### **Information Product:**

*Killing the Competition with Captive Supplies: A Special Report on How Meatpackers are Forcing Independent Family Hog Farmers out of the Market through Exclusive Contracts.* Land Stewardship Project (LSP), April 1999. Special report. Contact LSP, 651-653-0618.

### **Education**

**NEW** — *People to People: Enhancing the Quality of Life and Profitability of Family Farms* (LNC 99-161.1, see also LNC 96-98)

**Duration:** July 1999 - July 2001

**SARE Funding:** \$58,000

**Project Coordinator:** Lynda Converse, Sustainable Farming Association of Central Minnesota, 320-594-2456 (ph/fax)

This project is a continuation of the Sustainable Farming Association of Central Minnesota's networking and educational programs for farmers, farm service providers, and other community members interested in sustainable agriculture. It will build on previous projects where farmers and others have come together at farmer-led, on-farm field tours and workshops to share information. It will also provide a support network, which brings the fun and opportunity back into farming. The focus of this project is to host workshops, farm tours, group meetings, exhibits and presentations at farm shows, and other opportunities. Information presented at events will cover dairy, grazing, soil nutrient management, cover crops, agroforestry, integrated whole-farm systems, buckwheat, and other alternative crop and livestock production methods.

**NEW** — *Financial Indicators of Sustainability on Michigan Farms* (LNC 99-159)

**Duration:** July 1999 - July 2000

**SARE Funding:** \$27,900

**Project Coordinator:** John Durling, Michigan Agricultural Stewardship Association, 517-353-3209, 517-353-3834 (fax), durling@pilot.msu.edu

The project team will evaluate the usefulness of financial indicators for sustainable agriculture to assess sustainability of Michigan farms. Farmers will partner with their respective Michigan State University Extension Farm Management Agents to evaluate the financial indicators using farm-specific financial data. Farmer cooperators will be introduced to the indicators through two workshops where they will work one-on-one with their agent. Michigan State University extension specialists will work with farmers to address sustainability issues (e.g., government program reliance, use of equipment and energy, job creation, and livestock production and feed use) identified by the indicators.

**NEW** — *Skill Training for Beginning Farmers* (LNC 99-151)

**Duration:** July 1999 - July 2001

**SARE Funding:** \$30,886

**Project Coordinator:** Jerry Jost, Kansas Rural Center, 785-776-5851, jjost@flinthills.com

Small-scale beginning farmers will gain confidence and skills essential to successful production and marketing in a series of hands-on training workshops. Designed specifically to meet the educational needs of women farmers, the workshops will provide the basic knowledge and experience needed to overcome barriers that women farmers encounter in farm management. The Sundog Farmstead Alliance, a cluster of women farmers, identified educational needs. The following skills will be taught and practiced by participants: business and market planning, marketing value-added products, small engine maintenance, maintaining farm equipment, market garden production, construction of a wooden building or a root cellar, crop/forage nutrient management and soil quality, fence selection and construction, animal wellness and low-stress animal management, and financial enterprise analysis.

## *Research and education grants*

*On the Rosebud Sioux Reservation in South Dakota, Native American children sell their food wares at a WIC-supported farmers market. (DNC 98-04)*



*Farmland scenery in Michigan.*



REFLECTIONS



## *Research and education grants*



*A broad horizon forms a boundary on the Jack Orts farm in Oriska, North Dakota. Orts is developing a management-intensive grazing system for the production of grass-fed beef and enhancement of wildlife habitat. (FNC 98-229)*



*Hogs on Nolan Jungclaus' farm spend their days digging in the deep-bedded straw system, set up with the help of a SARE grant. Jungclaus said that he is hopeful that his children can take part in this farmer-friendly alternative livestock system. (FNC 94-88)*

**NEW — Agricultural Enterprise Development at Nebraska Indian Community College (LNC 99-148)**

**Duration:** July 1999 - July 2001

**SARE Funding:** \$94,207

**Project Coordinator:** Schuyler Houser, Nebraska Indian Community College, 402-857-2434, 402-857-2543 (fax), sky708@aol.com

The Santee and the Omaha Indian people of Nebraska have the following interconnected problems that relate to agriculture: unemployment rates above 50 percent, few employment opportunities in traditionally male-identified occupations, a high percentage of tribal land leased to non-Indian farmers, and poor diets that cause health problems. The project team will address these problems through a sustainable agriculture project administered by the Nebraska Indian Community College in partnership with the University of Nebraska-Lincoln and the Nebraska Sustainable Agricultural Society. The team will develop a two-year training program that would lead to the development of small agricultural enterprises. These enterprises would, in turn, lead to the development of jobs, increased local food production, and enhancement of land and water resources.

**NEW — Presenting NCR SARE Research Results in the Context of Whole-Farm Planning (LNC 99-145)**

**Duration:** July 1999 - July 2001

**SARE Funding:** \$85,000

**Project Coordinator:** John Lamb, The Minnesota Project, Inc., 651-645-6159, 651-645-1262 (fax), water007@tc.umn.edu

The overall objective of this project is to synthesize and present NCR SARE research findings in a whole-farm planning context for farmers and farm service providers. Project participants will review the body of NCR SARE research and filter findings through the essential elements of whole-farm planning established by the Great Lakes Basin Whole-Farm Planning Network. The resulting draft report will offer concrete, research-based ideas for solving problems. In each participating state, leaders and farmers will be working to plan and conduct field days where participants will learn about NCR SARE research and whole-farm planning. A workbook will be produced that incorporates results of the field days and cooperating farmers' experiments.

**Alternative Systems for Livestock in Nebraska (LNC 98-144)**

**Duration:** August 1998 - July 2000

**SARE Funding:** \$98,200

**Project Coordinator:** Wyatt Fraas, Center for Rural Affairs, Nebraska, 402-254-6893, 402-254-6891 (fax), wyattf@cfra.org

This project recruits farmers and ranchers to document and demonstrate their alternative production systems for livestock. Seven producers were interviewed in four Extension districts. Production systems include feeding cattle on standing crops, raising poultry on pasture, grass-based dairy farming, feeding sows on pasture and crop residue, and using management-intensive grazing for beef cattle. The team developed a data collection protocol, collected economic data from seven farms, and introduced more than 400 people to production alternatives. The second year of the project will include data collection from additional producers, publication of the economic data, and additional workshops and demonstrations.

**Full Report Available**

**Heartland Sustainable Agriculture Network (LNC 98-142)**

**Duration:** August 1998 - July 2000

**SARE Funding:** \$64,000

**Project Coordinator:** Jerry Jost, Kansas Rural Center, 785-776-5851, jjost@flinthills.com

The Heartland Network provides guidance and resources that allow local leadership to create their own solutions through farmer-to-farmer clusters. The Heartland Network is actively working with 16 clusters. They have provided training on goal setting, understanding ecosystem principles, setting testing guidelines, and developing personal whole-farm notebooks with two clusters. Two clusters remain involved with Kansas State University experiment station cover crop research. Five clusters continue to explore rotational grazing systems. Three clusters hosted a regional meeting. This project will continue with mini-grants awarded to clusters to explore specific options. Learning teams will assist in the research, documentation, and information transfer of successful agricultural innovations into rural communities.

**Full Report Available**

### Information Products:

Technical guides on cover crops, crop rotations, weed management, farmer clusters, marketing grass-fed beef, and more. Contact the Kansas Rural Center, 785-873-3431.

*Training and Transitioning New Farmers: A Practical Experiment in Farmer Self-Development and Institutional Reinvention* (LNC 97-115, see also LNC 95-88)

**Duration:** July 1997 - August 2000

**SARE Funding:** \$29,000

**Project Coordinator:** George Stevenson, University of Wisconsin Center for Integrated Agricultural Systems, 608-262-5202, 608-265-3020 (fax)

The Wisconsin School for Beginning Dairy Farmers (WSBDF) offers qualified students the chance to attend the University of Wisconsin (UW) Farm and Industry Short Course, special training sessions, and seminars in the management of grazing-based dairy farms. The school also offers farm internships, monitoring by experienced graziers and UW faculty, and the potential for future support and training. WSBDF has been partially supported by SARE for five years. This project continues activities of prior grants for the school, which is transitioning to financial self-reliance. Please request a full report for details.

### Full Report Available

### Information Products:

*Wisconsin School for Beginning Dairy Farmers*. Center for Integrated Agricultural Systems (CIAS), January 1999. Research brief, free. Contact CIAS, 608-262-5200.

*Wisconsin School for Beginning Dairy Farmers*. Website, see [www.wisc.edu/cias/research/gds/dairysch.html](http://www.wisc.edu/cias/research/gds/dairysch.html).

*Farm Beginnings: An Educational Training and Support Program to Establish Young Dairy Farmers in Southeast Minnesota* (LNC 97-111)

**Duration:** July 1997 - July 1999

**SARE Funding:** \$90,000

**Project Coordinator:** Chuck Schwartau, University of Minnesota Extension Service, 612-385-3100, 612-385-3089 (fax), [cschwartau@extension.umn.edu](mailto:cschwartau@extension.umn.edu)

The major goal of the Farm Beginnings program is to help young people establish profitable and environmentally sound farming operations in the ecologically fragile southeast corner of Minnesota. The project team developed a workshop series to provide participants with information on goal-setting and financial management; business planning; low-cost, sustainable production techniques; and financing alternatives. Thirty families have participated in the program. Sustainable farmers who manage profitable, low-cost operations became farm mentors. The team also developed an educational series that includes sustainable farm tours; legal, financial, and retirement planning information; and events for retiring and new farmers. They also worked on procuring incubation sites and securing program funding.

### Full Report Available

*Packaging, Testing, and Disseminating a Set of Indicators for Ecological, Financial, and Social Monitoring on Farms* (LNC 96-109)

**Duration:** September 1996 - October 1998

**SARE Funding:** \$88,000

**Project Coordinator:** George Boody, Land Stewardship Project, Minnesota, 612-653-0618, 612-653-0589 (fax), [boody002@gold.tc.umn.edu](mailto:boody002@gold.tc.umn.edu)

This project team took a multi-disciplinary, multi-professional approach to monitoring on-farm indicators of sustainability. The monitoring team included people from ecology, rural sociology, hydrogeology, soil science, fish and wildlife, and agricultural economics. It combined perspectives of farmers, agency officials, researchers, consultants, and non-profit staff members. The project focused on farms in transition to management-intensive rotational grazing. The team developed *The Monitoring Tool Box*, a set of indicators that farmers can use to see if they are making progress toward goals. The prototype *Tool Box* was reviewed by farmers and others and released in 1998. It is a practical guide for those interested in monitoring the impact of management decisions on land, finances, and family. The team also produced a video, *Close to the Ground*, that shows team interaction and makes suggestions for how to form monitoring teams.

### Full Report Available



## Research and education grants

### REFLECTIONS

*Native American children sell their home-grown vegetables through a WIC farmers market on the Rosebud Sioux Reservation in South Dakota. Project leader Ann Krush said that gardening brings young and old together to learn from each other and develop positive relationships. (DNC 98-04)*



*The sun sets on a peaceful scene at Phil Hueneker's farm in Bellevue, Iowa. Hueneker developed and promoted a local market for beef, pork, lamb, ostrich, and bison and educated consumers about health benefits of meats raised in a humane environment without hormones and antibiotics. (FNC 98-218)*



## *Research and education grants*



*Flowers grace the landscape of Lavinia McKinney's Brixey, Missouri farm. McKinney organically produces Chinese and indigenous medicinal plants for high profits. (FNC 98-215)*



*Jack and Dorothy Orts stand at a fence post on their Oriska, North Dakota, farm where they are enhancing wildlife habitat through management-intensive grazing. (FNC 98-229)*

**Information Products:**

*The Monitoring Tool Box*, Land Stewardship Project (LSP), 1998. Guidebook, price below.

*Close to the Ground*. LSP, 1998. Video, price below.

*Close to the Ground*. LSP. Newsletter, price below.

\$35 plus \$7 S/H for all three. Bulk discounts available.

*Monitoring Sustainable Agriculture with Conventional Data*. Dick Levins. \$7.

Contact LSP, 507-523-3366.

*Experiential Learning Activities for an Undergraduate Minor in Sustainable Agriculture Systems (LNC 96-103)*.

**Duration:** September 1996 - June 2000

**SARE Funding:** \$122,732

**Project Coordinator:** Craig Sheaffer, University of Minnesota, 612-625-7224, 612-625-1268 (fax), sheaf001@maroon.tc.umn.edu

The objective of this project is to develop a sustainable food systems curriculum package for faculty advisors and student internship hosts to facilitate experiential learning theory. The project will also help undergraduate students become fully engaged in the learning cycle. A tri-state workshop was held to demonstrate advantages of experiential learning. A course was developed that introduces internship advisors to background on theory of the experiential learning cycle, how to plan for more reflective-observation activities, and how to develop more active experimentation. The goal of the course was to enhance students' skills in systems assessment, problem-analysis, and decision-making in the context of sustainable agriculture. The purpose of a field course was to introduce students to sustainable agriculture in real-life systems. A regional directory has been created, listing internship opportunities in sustainable agriculture.

**Full Report Available****Information Product:**

*Directory of Internship Opportunities*. Minnesota Institute for Sustainable Agriculture. See [www.misa.umn.edu](http://www.misa.umn.edu).

*People to People: Sustainable Agriculture Networking for Farmers and Rural Communities (LNC 96-98, see also LNC 99-161.1)*

**Duration:** September 1996 - August 2000

**SARE Funding:** \$97,000

**Project Coordinator:** Lynda Converse, Sustainable Farming Association of Central Minnesota, 320-594-2456 (ph/fax)

The goal of this project is to continue educational outreach and networking opportunities for farmer members of the Sustainable Farming Association of Minnesota (SFA) and other interested parties in: whole-farm planning, farmer travel, developing markets/marketing knowledge, and developing school curriculum. SFA has provided six whole-farm planning field tours/pasture walks with more than 200 attendees. Farmer travel funds have made it possible for farmer members to attend events and bring information back to share with others. SFA also hosted two marketing workshops. The high school level curriculum, which focuses on agroforestry, is available for distribution. The first and second grade curriculum is being pursued with plans to complete and distribute a coloring book and 12-minute video by September 2000.

**Full Report Available****Information Products:**

Videotapes and publications, including curricula, from the SFA Resource Library. Contact Lynda Converse, Sustainable Farming Association of Minnesota of Central Chapter, 320-594-2456, [converse@rea-alp.com](mailto:converse@rea-alp.com).

*Increasing Rural Women's Leadership in Sustainable Agriculture and Community Development (LNC 96-94)*

**Duration:** September 1996 - August 1999

**SARE Funding:** \$62,820

**Project Coordinator:** Cris Carusi, (formerly) Nebraska Sustainable Agriculture Society, 402-254-2289, 402-254-6891 (fax)

The objectives of this project were to organize and support at least five groups of women in Nebraska to work for sustainable agriculture and community issues; provide opportunities



for women to strengthen abilities and willingness to take leadership on farms and in communities; and improve women's ability to access agricultural outreach programs and take part in statewide sustainable agriculture networks. The women's groups identified issues affecting their farms and communities and created goals and plans to address them. The groups gained education on organic gardening, pastured poultry production and processing, medicinal and culinary herb production, vegetable and flower seed production, management-intensive grazing, home-based businesses, and cooperative marketing. The project team surveyed the women and found that many made changes in their operations and that some changes were directly attributable to involvement in the group.

#### **Full Report Available**

##### **Information Product:**

*Building Rural Women's Leadership in Sustainable Agriculture.* Nebraska Sustainable Agriculture Society (NSAS), 1999. Booklet, \$10. Contact NSAS, 402-254-2289.

*Training and Transitioning New Farmers: A Practical Experiment in Farmer Self-Development and Institutional Reinvention (LNC 95-88, see also LNC 97-115)*

**Duration:** September 1995 - August 1998 (final report received April 1999)

**SARE Funding:** \$85,800

**Project Coordinator:** George Stevenson, University of Wisconsin Center for Integrated Agricultural Systems, 608-262-5202, 608-265-3020 (fax)

The Wisconsin School for Beginning Dairy Farmers (WSBDF) aims to get more young people into dairy farming using management-intensive rotational grazing. WSBDF is the only school of its type in the nation. In 1995, project participants traveled to New Zealand to study dairy farmer career development. Upon return, the team procured funds to operate WSBDF in cooperation with the University of Wisconsin Farm and Industry Short Course. Dairy graziers have been eager to speak at the grazing seminar and serve as mentors. Students report that they have learned an immense amount from the internship. Student recruitment and post-graduation employment are weaker areas.

#### **Full Report Available**

##### **Information Products:**

*Wisconsin School for Beginning Dairy Farmers.* Center for Integrated Agricultural Systems (CIAS), January 1999. Research brief, free.

*Wisconsin School for Beginning Dairy Farmers.* Website, see [www.wisc.edu/cias/research/gds/dairysch.html](http://www.wisc.edu/cias/research/gds/dairysch.html).

*Dairy Grazing Seminar Notebook.* CIAS, \$25.

*Grazing Reference Materials Manual.* CIAS, \$49.

*Dairy Farmer Career Paths: Farm Entry and Exit Transitions in New Zealand and Wisconsin.* George Stevenson, Russell O'Harrow, and Douglas Romig. CIAS, May 1996. Report, \$5.

Contact CIAS, 608-262-5200.

*Forum on Grass-Based Dairy Economics, Parts I and II.* CIAS, February 1999. Audio cassette tapes, \$5 each. Contact Resource Express, 800-535-3830, [www.rexp.com](http://www.rexp.com).

##### **Natural Resources**

**NEW** — *Developing Whole-Farm Nutrient Management (LNC 99-158)*

**Duration:** July 1999 - July 2001

**SARE Funding:** \$98,400

**Project Coordinator:** C J Koopmans, Michael Fields Agricultural Institute, Wisconsin, 414-642-3303, 414-642-4028 (fax), [mfai@mfai.org](mailto:mfai@mfai.org)

This project will increase farmers' awareness of the need to manage nutrient flows and budget for soil organic matter; tap farmers' knowledge and experience to develop and test nutrient management tools; and develop a farmer-friendly, practical nutrient budgeting system. Twenty farms each in Illinois and Wisconsin will be assessed for nitrogen, potassium, and phosphorous. Six farms that show nutrient imbalances will be identified and selected from each group. The six farms in each state will represent an even number of livestock, cash grain, and mixed farming operations. Based on crop rotations of the 12 farms, the team will estimate the impact of management practices on organic matter in the long-run using the Organic Matter Budgeting System. The team will also develop and distribute a practical guidebook.

## Research and education grants

### REFLECTIONS

Donald Struxness shows a part of the cattle watering system he developed with the help of a SARE grant. He also constructed windbreaks and shelterbelts that help him "keep cows in the corn even during winter storms."  
(FNC 98-210)



On Donn Teske's Wheaton, Kansas farm he is developing a small mobile windmill connected to a squeeze pump that pumps water from farm ponds to a large supply tank located at the highest elevation on the ranch. Water is gravity-fed to paddocks.  
(FNC 98-224)



## *Research and education grants*

IANR photo



*In Milo, Missouri, Denice Trimmer-May experimented with corn gluten meal as a pre-emergent herbicide and as a slow-release nitrogen fertilizer in organic strawberries. (FNC 98-244)*



**NEW** — *Effect of Organic Amendments on Soil Quality and Nutrient Cycling in the North Central Region (LNC 99-156)*

**Duration:** July 1999 - July 2001

**SARE Funding:** \$52,360

**Project Coordinator:** Jurg Blumenthal, University of Nebraska, 308-632-1372, 308-632-1365 (fax), jblumenthal1@unl.edu

Objectives of this project are to compile and synthesize information on organic soil amendments into educational products and to increase the understanding of organic soil amendments. A complete bibliography and a suite of five different educational products will be created synthesizing the effect of organic soil amendments on soil quality and nutrient cycling in the North Central region. A thorough process of review, critique, and feedback will ensure that the needs of diverse audiences are met. Relevant information will be gathered using OCLC Firstsearch Databases (OLC Online Computer Library Center, Inc.), the University of Nebraska library system, the USDA CRIS database, SARE reports, and inquiries into popular publications related to sustainable agriculture. This information will be evaluated and synthesized into scientific popular articles, a slide show with documentation, a poster display, self-study material, and a web page.

*Soil Fertility Paradigms Evaluated through Collaboration On-Farm and On-Station (LNC 98-138)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$59,027

**Project Coordinator:** Derrick Exner, Iowa State University, 515-294-5486, 515-294-9985 (fax), dexner@iastate.edu

The project team is involving stakeholders on both sides of two contradictory approaches to soil fertility to compare the economic and agronomic consequences of these two philosophies. They have implemented a series of side-by-side comparisons of the two management styles. Research sites consist of two Iowa State University experiment stations and six farms. Based on the two approaches to fertility, two sets of recommendations have been generated for each site, with materials applied accordingly in replicated plots. The project focuses on selected crop and soil parameters chosen to reflect impacts of the two systems on grain quality, soil quality, and soil biological activity. Crop production and profitability are

monitored for each site and for the study overall, as are crop quality and soil indicators. After each cropping year, farmer-scientist roundtables will take place to discuss findings and their significance.

**Full Report Available**

*Nutrient and Pesticide Loads in Subsurface Drainage from Organic and Conventional Cropping Practices (LNC 98-137)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$104,777

**Project Coordinator:** Gregory McIsaac, University of Illinois, 217-233-9411, 217-244-3219 (fax), gmcisaac@uiuc.edu

The primary objective of this project is to quantify and compare the concentrations and loads of nitrogen, phosphorus, and herbicides in subsurface drain effluent from certified organic and conventional corn-soybean cropping systems in central Illinois. The project team installed flow monitoring and sampling equipment at three pairs of organic and conventional fields. Monitoring efforts suggest that nitrate and chloride concentrations in drainage from organically managed fields are usually less than concentrations in water draining from the conventionally managed fields. Nitrate concentrations in drainage water from the organically managed fields increased when green manure crops were incorporated into the soil and row crops were grown. In most instances these concentrations have been less than the concentrations in the drainage water from conventionally managed fields, but in 1999 there was a significant exception to this.

**Full Report Available**

*Addressing Agricultural Practices and Water Quality Issues through Youth-Developed Decision Cases (LNC 98-136)*

**Duration:** August 1998 - July 2000

**SARE Funding:** \$41,498

**Project Coordinator:** Marla Reicks, University of Minnesota, 612-624-4735, 612-625-5272 (fax), mreicks@che2.che.umn.edu

The objectives of this project for students included learning about community water quality and conservation issues by developing decision cases and presenting them to the

community to encourage awareness of solutions to water quality problems. With the assistance of extension educators and teachers, students explored how farm management practices impacted water quality in their communities by gathering data and writing decision case studies in high school science classes. Materials were developed for teachers to use in the classroom to facilitate the development of decision cases and community forums. Pre- and post-tests assessed impact on student attitude and behavior. Additional classrooms have been recruited for year two, and additional cases are being developed.

#### **Full Report Available**

*Bioremediation of Saline Seeps (LNC 96-102)*

**Duration:** September 1996 - December 1999

**SARE Funding:** \$77,778

**Project Coordinator:** Kyle Mankin, Kansas State University, 785-532-2911, 785-532-5825 (fax), kmankin@ksu.edu

Objectives of this project were to demonstrate several practices for using soil water while it is still a relatively non-saline resource in saline seep recharge areas; to determine crops and management practices that can sustainably control seeps; to educate farmers about causes and potential solutions; and to demonstrate an inexpensive method for tracking salinity and flow patterns. The project team analyzed a database of surface and profile soil salinity of both seep and recharge areas at each of five sites. There was evidence of saline seeps receding at the site that fully implemented project recommendations, such as growing alfalfa or native grasses, while saline seep severity increased in two sites that did not implement alternative systems. Results indicated that at least one-third of the up-slope recharge area should be converted to alfalfa. The economics of producing switch grass as a bioenergy crop was compared to continuously cropped winter wheat and alfalfa. More favorable economics are needed for competitive production of bioenergy crops. However, alfalfa was an economically competitive cropping alternative to wheat in this area.

#### **Full Report Available**

#### **Information Product:**

*Controlling Saline Seeps.* Mark Schrock, Kyle Mankin, and Ray Lamond. Extension bulletin. See [www.oznet.ksu.edu/library/crpsl2/MF2391.pdf](http://www.oznet.ksu.edu/library/crpsl2/MF2391.pdf)

#### **Quality of Life**

*Regional Inventory and Assessment Project (LNC 95-93)*

**Duration:** September 1995 - February 2000

**SARE Funding:** \$146,204

**Project Coordinator:** Cornelia Flora, Iowa State University North Central Regional Center for Rural Development, 515-294-1329, 515-294-3180 (fax), cflora@iastate.edu

Understanding the importance of community and social capital around quality of life and sustainable agriculture has the potential of forming new farm community entrepreneurial partnerships that support the multiple functions of farming for rural communities. The last phase of this project analyzes farm women's roles within the swine production commodity system of the Upper Midwest. Focus groups, interviews, participant observation, participatory techniques, and surveys are used to gather information on farming systems and quality of life of household members. An advisory council will be formed from key women in the study. This council will be asked to identify other women in swine production to serve as focus group and interview participants and to design dissemination of study results.

#### **Full Report Available**

#### **Information Products:**

*Slow Food: Sustainable Agriculture and Responsible Eating.* Linda Gammell, Michael McCall, Sandra Menefee Taylor. Videotape, \$10. Contact Sandra Menefee Taylor, 612-291-7492.

*Social Capital and Sustainability: The Community and Managing Change in Agriculture.* Videotape, \$25. Contact Iowa State University Extension Distribution Center, 515-294-5247 or [pubdist@exnet.iastate.edu](mailto:pubdist@exnet.iastate.edu).

## *Research and education grants*

Larry Becker, in Lancaster, Kansas, is forming a beef alliance association whereby cow/calf producers cooperate to breed, feed and market their cattle for a premium price.

(FNC 98-220)



Farmland scenery in Wisconsin.



REFLECTIONS



## *Research and education grants*



*Ranching land in the Nebraska sandhills.*



*Kids can play in a corn maze – and learn about agriculture – on Pam Bosserd's farm. The Bosserds sell a variety of vegetable crops and provide on-farm educational experiences in Marshall, Michigan. (FNC 98-204)*

## **Waste Management**

*Use of a Vegetative Filter as an Alternative Waste Management System for a Sustainable, Seasonal Management-Intensive Grazing Dairy (LNC 97-120)*

**Duration:** July 1997 - December 2000

**SARE Funding:** \$55,755

**Project Coordinator:** Richard Crawford Jr., University of Missouri, 417-466-2148, 417-466-2109 (fax), [crawfordr@missouri.edu](mailto:crawfordr@missouri.edu)

The overall goal of this project is to evaluate the socio-economic and environmental feasibility and sustainability of a 60- to 80-cow seasonal, management-intensive grazing (MIG) dairy. Construction of a seasonal, MIG dairy facility was completed in 1999. The waste management system is designed to handle liquid and solid waste from a milking parlor and holding areas. Because cattle on pasture deposit approximately 71 percent of the urine and manure directly on pasture themselves, the waste system is expected to handle only 29 percent of the total waste. Approximately two-thirds of this 29 percent will be scraped and hauled as a solid for spreading. The remaining one-third, or about 10 percent of the total waste, plus about 5 gallons per cow per day of waste water will be stored in holding tanks and applied to the vegetative filter area on a weekly basis. The team will monitor surface and ground water.

### **Full Report Available**

## **Weed Management**

*Use of Cover Crop Practices to Control Weeds in Integrated Lower-Chemical Input Systems of Vegetable Production (LNC 97-118)*

**Duration:** July 1997 - January 2000

**SARE Funding:** \$87,823

**Project Coordinator:** Jeff Dickinson, Stratford Ecological Center, Ohio, 614-363-2548, [Secenter@aol.com](mailto:Secenter@aol.com)

Four cover crop management strategies were evaluated on a mixture of hairy vetch, crimson clover, rye and barley. This mixture, screened from previous work, was found to be superior both in terms of weed suppression and in biomass production, along with subsequent nutrient release in veg-

etable production. Strategies were evaluated for economic and ecological function in comparison with each other and a fifth control treatment. Four replications of the five treatments were evaluated for soil microbial biomass, earthworms, nematodes, nutrients, nitrogen cycling, weed density, community composition, and biomass. Two farmer cooperators planted test plots of the cover crop mixture for on-farm evaluation.

### **Full Report Available**

*Evaluation of Composted Manure as a Growth and Delivery Substrate for the Biological Weed Control Agent Gliocladium virens in Sustainable Vegetable Production Systems (LNC 96-100)*

**Duration:** September 1996 - August 1999

**SARE Funding:** \$70,000

**Project Coordinator:** Stephen Weller, Purdue University, Indiana, 765-494-1333, 765-494-0391 (fax), [steve\\_weller@hort.purdue.edu](mailto:steve_weller@hort.purdue.edu)

The overall objective of this research was to develop a more efficient and potentially useful system for growing the fungus *G. virens* in order to deliver the biological herbicide to the crop field in a form that was active against weed growth in vegetable crops. Initial results showed that the required nutrients and carbon source necessary for fungal growth on composted chicken manure (CCM) could be reduced by one-half, that the required incubation time prior to field delivery could be reduced from 28 to 7 days, and that there was no need for sterilizing the CCM prior to inoculation. Reduction of the nutrient and carbon source to one-half caused a decrease in the active herbicide component production over time. Field experiments were conducted in tomato, pumpkin, and snap bean crops to assess the potential of the mycoherbicide as a weed control agent. The studies showed that the mycoherbicide had activity under field conditions, although the overall effectiveness varied considerably. Results were promising in many respects for the potential of this *G. virens* system as a biological control agent.

### **Full Report Available**

## New PDP Coordinator Sets High Goals

**A**fter a competitive search, NCR SARE's Administrative Council appointed Paula Ford to the post of regional PDP coordinator in April 1999. Ford brings a diverse set of skills and knowledge to the position from more than a decade of professional experience in sustainable agriculture and food systems. A former program manager of the Southern Region SARE program, Ford received her M.S. in Agronomy/Soils at the University of Georgia and her B.S. in Agronomy at Clemson University.

Ford developed PDP goals and strategies in collaboration with state sustainable agriculture coordinators and other stakeholders. Her facilitative role will emphasize strong communication and coordination, integration of SARE programs and participants, and program evaluation. She will stress systems approaches, diverse partnerships and perspectives, state and local autonomy, and participatory and interactive models of learning.

In her first year, Ford has visited nearly all states in the region, developed a comprehensive plan of work and evaluation process, and boosted electronic communication through the NCR SARE website and listserves.

Contact Paula Ford at:

NCR SARE Professional Development Program  
4A Edwards Hall  
Kansas State University  
Manhattan, KS 66506-4810  
785-532-5328  
785-532-6175 (fax)  
pford@oz.oznet.ksu.edu

**S**ince 1994, NCR SARE has awarded Professional Development Program (PDP) grants to diverse teams of people developing and implementing educational programs in sustainable agriculture for agricultural educators.

Personnel from the Extension Service, the Natural Resources Conservation Service (NRCS), and other agencies and institutions benefit from the tools and information provided by PDP project coordinators. PDP projects have included workshops, training manuals, curriculum materials, videos, websites, resource networks, and on-farm activities.

We call for PDP proposals annually in September. Proposals are reviewed by a committee of farmers, educators, and agency personnel. Project funding is usually available in early fall, and individual PDP awards range from \$10,000 to \$100,000 for two-year projects. Nearly all projects contribute significant matching funds. NCR SARE funds 10 to 15 projects at a total of nearly \$500,000 each year.

The PDP also includes annual funds for 13 North Central land-grant universities. State sustainable agriculture coordinators at the land-grants spearhead state plans in sustainable agriculture education, which have included statewide newsletters, websites, workshops, and resource networks. For information on your state sustainable agriculture program, contact your state PDP coordinator, listed on pages 20-21.

The following PDP grants, arranged by year awarded, were active in 1999. Each entry includes the project title, project number, duration, funding, and project coordinator. For more information, contact the project coordinator or request full reports from the NCR SARE office. Some projects have developed information products that can be ordered, as listed. You can also contact Paula Ford (see box at left).



# Professional Development Program

## REFLECTIONS

Ralph Upton directed on-farm research to determine the economic feasibility, long-term effectiveness and best variety of cover crops for his Springerton, Illinois farm. (FNC 97-196)



A variety of unique landmarks dot the Midwest, says NCR SARE's producer grant coordinator Ken Schneider. "The North Central region is large, diverse and full of interesting small towns and rural areas," he adds. Schneider has traveled thousands of miles in his pick-up truck to visit producer grant recipients. This picture shows metal artwork in North Dakota.



## *Professional development grants*



*A pasture scene on Greg Williamson's Porterfield, Wisconsin farm, where he is testing forage quality in a management-intensive grazing system. (FNC 98-228)*



*On the Rosebud Sioux Reservation, Native American children till the ground they will plant to crops and sell to local people through a farmers market. Ann Krush, in Mission, South Dakota, directed a SARE grant to support the children's activities. (DNC 98-04)*

# Professional Development Grants

**NEW** — *Environmental Farm Analysis and Planning: A Whole-Farm Planning Training Exercise Designed for Extension and NRCS Personnel* (ENC 99-46)

**Duration:** July 1999 - June 2001

**SARE Funding:** \$82,994

**Project Coordinator:** William Hargrove, Kansas State University, 785-532-7149, 785-532-6563 (fax), bhargrov@oz.oznet.ksu.edu

State and federal agency educators and specialists will receive comprehensive training and access to resources designed for farm/ranch family, environmental, production, and financial goal-setting, assessment, planning, and monitoring for sustainable agriculture. Workshops will offer hands-on use of a newly developed Kansas environmental farm assessment and planning tool, along with farm financial planning tools. Participants will study a case farm.

**NEW** — *Sustainable Agriculture: A Profitable, Ecological, and Socially Sound Strategy for Small Farms* (ENC 99-45, see also ENC 97-16.1 and ENC 98-28)

**Duration:** July 1999 - June 2001

**SARE Funding:** \$10,000

**Project Coordinator:** John Ikerd, University of Missouri, 573-882-4635, 573-884-6572 (fax), ikerdj@missouri.edu

This project will enhance the ability of Extension agents and other information providers to provide traditionally underserved small farm families with practical and useful information. The project will increase awareness among information providers of a wide range of opportunities for enhancing the economic viability of small farms by focusing on ecologically sound and socially responsible farming and marketing alternatives. Coordinators provided travel scholarships for information providers throughout the North Central region to attend the 1999 *Small Farm Today* Conference and Trade Show, which included two full days of seminars and workshops relevant to small farms.

**NEW** — *Building Human Capital for Value-Added Marketing* (ENC 99-44)

**Duration:** July 1999 - June 2001

**SARE Funding:** \$55,180

**Project Coordinator:** Natalie Bement Rector, Michigan State University Extension, 616-781-0785, 616-781-0768 (fax), rector@msue.msu.edu

To feed on an explosion of interest in alternative marketing in Michigan, this project will: develop training and travel opportunities for a team of Extension agents and farmers to support and encourage value-added projects; continue developing a resource inventory notebook of sources to assist Michigan farmers and Extension agents in niche markets, specialty crops, and processing cooperatives; and conduct on-farm demonstrations of sustainable practices and specialty crops that will add to the diversity and value of on-farm products.

**NEW** — *Sustainable Agriculture Marketing Education for Nebraska* (ENC 99-43)

**Duration:** July 1999 - June 2001

**SARE Funding:** \$42,968

**Project Coordinator:** Cris Carusi, (formerly) Nebraska Sustainable Agriculture Society, 402-254-2289, 402-254-6891 (fax)

This project will train Nebraska Extension educators and other technical assistance providers to help producers capture more of the food dollar by marketing sustainably raised foods directly to consumers. Through a series of workshops and field days, farmers and agency representatives will learn together about farmers markets, community-supported agriculture, and processing and direct marketing of "healthy" meats. Publications will be written and distributed to help trainees implement what they learn and to broadly disseminate the information.



**NEW** — *Reservation Education of Leafy Spurge Control with Multi-Species Grazing of Sheep and Cattle (ENC 99-42)*

**Duration:** July 1999 - June 2001

**SARE Funding:** \$76,476

**Project Coordinator:** William Ferris, North Dakota State University Extension Indian Reservation Program, 701-627-3446, 701-627-4800 (fax), bferris@ndsuxext.nodak.edu

The Fort Berthold Indian Reservation, with a land base of more than 1 million acres, will host demonstration sites using multi-species grazing of cows and sheep to control leafy spurge. Field professionals from North Dakota and neighboring states' reservations, 1999 land-grant tribal colleges, tribal natural resource departments, Natural Resources Conservation Service, Bureau of Indian Affairs, U.S. Army Corps of Engineers, and North Dakota State University Extension Service will be invited to hands-on training sessions about range and sheep management techniques. Professionals will be encouraged to set up their own demonstrations.

**NEW** — *Toolbox Training for Sustainable Agriculture Education (ENC 99-41)*

**Duration:** July 1999 - June 2001

**SARE Funding:** \$35,800

**Project Coordinator:** Wendy Wintersteen, Iowa State University Extension, 515-294-7801, 515-294-5334 x1 (fax), winter@exnet.iastate.edu

Farmers in Iowa, Indiana, and the Midwest will be surveyed concerning practical skills needed in sustainable agriculture. Sets of practices will be developed into a workbook. Two one-day workshops will be held in Indiana and Iowa for Extension and Natural Resources Conservation Service employees and farmers where hands-on training will be provided on use and application of practical skills and practices. Notebooks will be distributed to other North Central states for use in professional development programs.

**NEW** — *Transitioning to Sustainable and Organic Grain and Livestock Production Systems: On-Farm Training for Extension Agents and NRCS Personnel (ENC 99-40)*

**Duration:** July 1999 - June 2001

**SARE Funding:** \$46,715

**Project Coordinator:** Margaret Huelsman, Ohio Ecological Food and Farm Association, 614-267-3663, 614-267-4763 (fax), oeffa@iwaynet

The Ohio Ecological Food and Farm Association (OEFFA) will hold a series of sustainable and organic grain and livestock production systems workshops for Extension and Natural Resources Conservation Service professionals. Growers who have successfully completed conversion to organic production will host the workshops. Growers and faculty from Ohio State University will present practical ideas for transition. Resource materials, developed by OEFFA, the University, and others, will be provided to professionals attending workshops.

**NEW** — *Building Sustainability through Agricultural Entrepreneurism (ENC 99-39)*

**Duration:** July 1999 - June 2001

**SARE Funding:** \$48,946

**Project Coordinator:** Connie Hancock, University of Nebraska Panhandle Research Extension Ctr, 308-254-4455, 308-254-6055 (fax), chancock1@unl.edu

A series of professional development workshops will build educator and researcher skills to help producers modify their operations in response to consumer wants and needs. The project team will assess producer needs linked to entrepreneurship; identify, evaluate, document, and develop instruction on innovative marketing strategies; identify topics and approaches attractive to younger persons interested in agriculture; develop program materials to supplement existing materials for educators and producers interested in business plans, strategic marketing, target market analysis, financial and risk management, and family business management; and increase working knowledge of available technology and its use in production, marketing, and other aspects of agricultural production.

## Professional development grants

A common pest in the Midwest, the European corn borer was the focus of David Kreutz' SARE project in Aurora, Nebraska. He intercropped strips of alfalfa with corn to provide habitat for beneficial predator insects to control corn borer and other pests. (FNC 98-207)



REFLECTIONS

IANR photo

## *Professional development grants*



*The Badlands break-up farm and ranch lands in western North Dakota.*



*Marchell Baehr in New Salem, Illinois, is testing new varieties of grapes, such as Catawba, Vignoles, Chamborcin, and Norton. The SARE grant helped him with planting and trellis construction on 5 acres of 22 different grape varieties to be tested for overall adaptability. (FNC 98-237)*



**NEW** — *Training on Grazing and Monitoring Riparian Corridors in Minnesota and Wisconsin (ENC 99-38)*

**Duration:** July 1999 - June 2001

**SARE Funding:** \$71,110

**Project Coordinator:** Caroline van Schaik, Land Stewardship Project, Minnesota, 651-653-0618, 651-653-0589 (fax), caroline@mtn.org

This project will synthesize knowledge from recent SARE-funded research on riparian grazing and monitoring into a new publication. Project coordinators will offer training at both an intermediate and introductory level through dissemination of publications and presentations. At an intermediate level, the team will host two on-farm training field days in each state for agency staff in techniques, approaches, and monitoring of grazing in riparian corridors. The project will disseminate publications and videos, host a website, and publish a newsletter.

**Outreach Education for Permaculture as Native Science (ENC 98-37.1)**

**Duration:** September 1998 - August 2000

**SARE Funding:** \$36,450

**Project Coordinator:** Ann Krush, Center for Permaculture as Native Science, 605-856-2964, 605-856-2011 (fax)

Objectives of this project include to encourage more families to garden within a community permaculture design; to assist program outreach personnel and others who want to start community projects of planting and care; to help program outreach personnel gain self-confidence; to develop relationships with Extension and Natural Resources Conservation Service staff; and to teach school children about permaculture. Special advances were made in self-confidence and leadership skills of the program assistants. Quantity and quality of food gardens increased to the point of establishing and supplying community WIC (USDA Woman, Infants and Children) farmers markets. Participants also planted trees, renewed pride in gathering and drying, established honeybee hives, and learned about renewable energy education, small applications and preparation for home-site installations. Youth involvement increased, and elders became more willing to share their knowledge. To develop positive relationships with local Extensionists will require continued effort.

**Full Report Available**

**Workshops on Land-Use and Farmland Policy (ENC 98-35)**

**Duration:** September 1998 - August 2000

**SARE Funding:** \$48,247

**Project Coordinator:** Kevin Schmidt, American Farmland Trust, 614-469-9877, 614-469-2083 (fax), kschmidt@farmland.org

With stakeholder involvement, American Farmland Trust, Ohio State University (OSU) and others designed and developed a series of five one-day workshops and training materials to empower OSU Extension, Natural Resources Conservation Service field staff and Soil and Water Conservation District staff on land-use management issues and farmland protection. The one-year project was pilot tested at five locations throughout Ohio. The quality of the materials, use of the Internet, involvement of farmers, and broad spectrum of stakeholders developing these workshops made this project unique in its efforts to address the growing need for information on land-use at the local level.

**Full Report Available**

**Information Product:**

*Land-Use and Farmland Policy Workbook.* American Farmland Trust, 1999. Limited quantity available, \$20. Contact Kevin Schmidt, 202-331-7300 x3035.

**Introduction to Management-Intensive Grazing Systems Workshops and Resource Manual for Educators (ENC 98-34)**

**Duration:** September 1998 - August 2000

**SARE Funding:** \$32,308

**Project Coordinator:** Deborah Cavanaugh-Grant, University of Illinois, 217-968-5512, 217-968-5512 (fax), cavanaugh@mail.aces.uiuc.edu

The project provided professional development training in management-intensive grazing systems at three regional workshops for Extension, Natural Resources Conservation Service, and Soil and Water Conservation District personnel. Participants gained a general understanding of management-intensive grazing systems and were equipped with knowledge of appropriate experts and sources of information for their clients. The project coordinator developed a resource notebook for the workshops. These activities increased the

University of Illinois Agroecology Sustainable Agriculture Program's involvement in management-intensive grazing systems outreach and the participants' awareness of sustainable agriculture.

#### **Full Report Available**

*Developing Advanced Grazing Educational Materials and Schools on Sustainable and Profitable Grazing Systems for the North Central Region (ENC 98-33)*

**Duration:** September 1998 - August 2000

**SARE Funding:** \$60,000

**Project Coordinator:** Chris Penrose, Ohio State University Extension, 740-385-3222, 740-385-6572 (fax), bartholomew.2@osu.edu

This project will develop a series of advanced grazing education resources, conduct workshops, train trainers in grazing education, and evaluate the program. Communications with grazing experts throughout the world is on-going. The project team is also conducting literature research and study tours to Europe and Argentina. The first round of advanced grazing schools were planned in Illinois and Ohio. Teaching material will be evaluated and finalized for the second round, which will be offered in fall 2000 and winter 2001. Topics to be offered for the grazing schools include: Learning Groups, Forage Budgeting, Financial Grazing Success, Soil Fertility, Managing Grasses, Environmental Concerns, Marketing Grass-Produced Products, Water Systems, Health Systems for Grazing Animals, Appropriate Supplementation for Livestock on Pasture, Fattening Cattle on Grass, Grazing Standing Crops, and Irrigated Pastures.

*Planning Sustainable Grazing Systems (ENC 98-32)*

**Duration:** September 1998 - August 2000

**SARE Funding:** \$45,740

**Project Coordinator:** Mark Boswell, Southern Iowa Forage and Livestock Committee, 515-322-3184, 515-322-3184 (fax)

The target audience for this training on planning sustainable grazing systems is Natural Resources Conservation Service and Iowa State University Extension field staff. Iowa Division of Soil Conservation employees, veterinarians, and others will

also participate. Trainees have had the opportunity to work directly with livestock producers. The coordinator held three training sessions during different times of the growing season to illustrate challenges and opportunities posed by various phases of grazing. Training is offered at three different locations in Iowa. Sixty-five participants are now registered for the course, which continues in 2000.

#### **Full Report Available**

*Revitalizing Community Development in the Dakotas (ENC 98-31)*

**Duration:** September 1998 - August 2000

**SARE Funding:** \$64,700

**Project Coordinator:** Tom Hanson, North Dakota State University, 701-857-7679, 701-857-7676 (fax), thanson@ndsuxt.nodak.edu

This project will foster sustainable community development in the Dakotas by enhancing local and regional food systems. It will equip Extension agents and others with the tools necessary to understand and collaborate in community development. The project team, including North Dakota State University sociologists, developed a resource manual for training sessions. The manual includes case studies of local food system activities in the Dakotas. A team of instructors completed day-long sessions at two sites in each state. An instructional video is being produced. Session evaluations will be compiled.

*Marketplace '99 (ENC 98-30)*

**Duration:** September 1998 - August 2000

**SARE Funding:** \$12,600

**Project Coordinator:** Tom Hanson, North Dakota State University, 701-857-7679, 701-857-7676 (fax), thanson@ndsuxt.nodak.edu

Marketplace '99 is a compilation of entrepreneurial and value-added efforts in North Dakota, combining booths and educational presentations. Scholarships were offered to two persons from each North Central region state to attend Marketplace '99. Extension agents from other North Central region states took information from Marketplace back to their states. In evaluations, they suggested using this event as a model for a similar efforts in their states.

## Professional development grants

### REFLECTIONS

*Keeping detailed records for growth, resistance to disease, yield, and quality of new grape varieties, Marchell Baehr helps promote grape production in New Salem, Illinois. (FNC 98-237)*



*In Madison, Ohio, Gene Sigel demonstrates that intensive tile drainage and new grape varieties can increase net income over traditional concord grape farming. His project compares growth, yield and winter hardiness of plants at different tile spacing. (FNC 98-241)*





## *Professional development grants*



*Henry Miller, in Constantine, Michigan, is exploring the economic feasibility of grazing cover crops and the impact that the practice would have on future crop production. (FNC 98-202)*



*Ralph Upton directed on-farm research to determine the economic feasibility, long-term effectiveness and best variety of cover crops for his Springerton, Illinois farm. Pictured is Upton in an experimental crop of sun hemp. (FNC 97-196)*

*Michigan Field Crop Ecology: Training and Field Demonstrations* (ENC 98-29, see also ENC 97-12.1)

**Duration:** September 1998 - August 2000

**SARE Funding:** \$47,677

**Project Coordinator:** Natalie Bement Rector, Michigan State University Extension, 616-781-0784, 616-781-0647 (fax), rector@msue.msu.edu

This project supplements funds for Michigan State University (MSU) Area of Expertise (AoE) Extension teams to develop and continue sustainable agriculture education. Major areas of emphasis include: local on-farm learning projects between agents and farmers, agroecology training for agents and Natural Resources Conservation Service personnel, and sharing of these experiences through the AoE team system. Funds go to 18 projects across the state, pursuant to the agent/farmer needs and cropping systems. Each agent reports on their project to the entire AoE team at an annual training session. This alone has created accountability, cross programming, improved communications between agents, and the multiplication of information. MSU published the 118-page *Michigan Field of Crop Ecology* book, which has been a focus of workshops and trainings.

#### **Full Report Available**

#### **Information Product:**

*Michigan Field Crop Ecology: Managing biological processes for productivity and environmental quality.* Michigan State University Extension, Bulletin, 1998. Contact MSU Extension, 517-355-2308 or msue@msue.msu.edu.

*Alternative Information Networking to Support Sustainable Agriculture on Small Farms* (ENC 98-28, see also ENC 99-45 and ENC 97-16.1)

**Duration:** September 1998 - August 2000

**SARE Funding:** \$32,950

**Project Coordinator:** John Ikerd, University of Missouri, 573-882-4635, 573-884-6572 (fax), ikderdj@missouri.edu

The project team held a professional development experience in conjunction with the 1998 National *Small Farm Today* Trade Show and Conference in Columbia, Missouri. The *Small Farm Trade Show* is an annual event sponsored by *Small Farm*

*Today* magazine. A pre-conference event for trainees included speakers and a Sustainable Small Farm Information Network (SSFIN) proposal, developed by participants from Missouri, Iowa, Wisconsin, and Indiana and members of the North Central Region Small Farm Task Force. Workshop participants addressed a potential SSFIN end-user panel. Teams of participants also surveyed farmers and educators and attended sessions at the conference to learn about small farmers' information needs. Each team presented survey results and discussed how to use the information to develop a prototype SSFIN.

#### **Full Report Available**

*Professional Training in Soil Quality* (ENC 97-27)

**Duration:** September 1997 - August 1999

**SARE Funding:** \$15,400

**Project Coordinator:** Stephen Baertsche, Ohio State University, 614-292-4077, 614-292-3747 (fax), baertsch.1@osu.edu

This program featured three groups of in-service workshops in soil quality. The first workshops focused on soil biology and organic matter, soil ecology, nutrient cycling, and implications of these processes for soil management. The second workshops provided participants with skills, materials, and tools to conduct informative and effective workshops for farmers and other landowners. The project team developed teaching materials and soil assessment tools with the assistance of a farmer advisory committee. Tools and materials were distributed to seven locations throughout Ohio. The third workshop provided hands-on field experience and training in the USDA Soil Quality Test Kit for a group of Natural Resources Conservation Service and Extension personnel, crop consultants, and farmers.

#### **Full Report Available**

#### **Information Products:**

*Soil Quality: What is it and Why is it Important?*, *Nutrient Cycling and Maintaining Soil Fertility*, and *Soil Tilth: Managing and Improving Soil Physical Conditions*. Peter Bierman, Ohio State University (OSU) Extension. Slide presentations, \$20/set or see [www.ag.ohio-state.edu/~prec/soil/slides/sld001.htm](http://www.ag.ohio-state.edu/~prec/soil/slides/sld001.htm).

*Soil and Water Resources*. OSU. See [www2.ag.ohio-state.edu/~prec/soil/results.htm](http://www2.ag.ohio-state.edu/~prec/soil/results.htm).

**Multi-Agency On-Farm Sustainable Agriculture Training (ENC 97-26)**

**Duration:** September 1997 - August 1999

**SARE Funding:** \$15,335

**Project Coordinator:** Rick Exner, Practical Farmers of Iowa, 515-294-5486, 515-294-9985 (fax), [dexner@iastate.edu](mailto:dexner@iastate.edu)

This project trained Natural Resources Conservation Service and Extension staff and farmers in innovative practices and approaches that show promise for the USDA Environmental Quality Incentives Program (EQIP), whole-farm planning, and on-going agency funding. The project developed three in-service events that would satisfy priorities of agencies and effectively use farmer skills. They invited the Farm Services Agency, the Iowa Department of Natural Resources, and the Iowa Department of Agriculture and Land Stewardship staff. In-services were held on farms in central, northeast, and western Iowa, focusing on: Integrated Farming; Quality Water, Quality of Life; and Building Markets, Building Communities.

**Full Report Available**

*Grazing Education for Educators and Bankers (ENC 98-36.1, ENC 97-25)*

**Duration:** September 1997 - August 1999

**SARE Funding:** \$25,000

**Project Coordinator:** Paul Daigle, Central Wisconsin River Graziers Network, 715-847-5213, 715-848-9210 (fax)

This project educated local agricultural educators and bankers about the benefits of Management-Intensive Grazing (MIG) by hosting pasture walks and developing a MIG curriculum. The project team and individual producers invited bankers to pasture walks and a one-day meeting to review benefits of MIG, case studies of three local graziers, and the economic impact of successful graziers on the community. They hosted a grazing workshop and compiled grazing materials for a new curriculum for high school and technical college educators. The curriculum consists of classroom instruction, tools needed to manage a grass-based farm, and the environmental and

lifestyle benefits of MIG. They also held a training session for instructors at a statewide conference, where they distributed the curriculum.

**Full Report Available**

**Information Products:**

*Management-Intensive Grazing*. Paul Daigle, Tom Cadwallader, 1998. Curriculum, free.

*Grass Dairying: An Introduction to Rotational Grazing*. Video-tape, free.

Contact Paul Daigle, 715-261-6006.

*Improving the Environment for Community-Supported Agriculture in Michigan, Ohio, and Indiana (ENC 97-24)*

**Duration:** September 1997 - February 2000

**SARE Funding:** \$23,966

**Project Coordinator:** Laura DeLind, Michigan State University, 517-355-7490, [Laura.Delind@ssc.msu.edu](mailto:Laura.Delind@ssc.msu.edu)

The Michigan Organic Food and Farm Alliance, the Ohio Ecological Food and Farming Association, and Sustainable Earth, Inc. joined forces to promote greater public awareness and support for Community-Supported Agriculture (CSA) in each of their respective states. They researched and published a CSA directory, *The Many Faces of Community-Supported Agriculture: Michigan, Ohio, and Indiana*. The directory profiles existing CSAs in all three states and makes recommendations to extension personnel, community planners, and activists for publicizing the CSA concept and addressing problems faced by these small, diversified farm enterprises. An annotated slide show, *The ABCs of CSAs*, has also been created to accompany the directory and will be used as another extension and public education tool. Dialogue between the three non-profits and CSAs is underway to develop inter- and intra-state CSA networks.

**Full Report Available**

**Information Products:**

*The Many Faces of Community-Supported Agriculture: Michigan, Ohio, and Indiana*. Laura DeLind, March 1999. Guide, \$10. Contact the Michigan Organic Food and Farm Alliance, 810-632-7952.



## Professional development grants

### REFLECTIONS

*In Van Meter, Iowa, Sylvia DeWitt is producing and marketing hosta plants to generate significant annual revenue from unproductive woodlands. She planted 35 hosta varieties and installed fencing to repel predators. (FNC 97-175)*



*Denice Trimmer-May experimented with corn gluten meal as a pre-emergent herbicide and as a slow-release nitrogen fertilizer in organic strawberries. Trimmer-May also sells ornamental peppers, pictured here on her farm in Milo, Missouri. (FNC 98-244)*



## Professional development grants



Kevin Green's agroforestry project includes controlling encroachment of sugar maples in his Fithian, Illinois, hardwood forests. He uses prescribed burning, spot spraying, and girdling of young trees. Maples are marketed for lumber and firewood. (FNC 98-231)



Phil Hueneke shows off his brand label on a banner at his farm in Bellevue, Iowa. Hueneke developed and promoted a local market for beef, pork, lamb, ostrich, and bison and educated consumers about health benefits of meats raised in a humane environment without hormones and antibiotics. (FNC 98-218)



*The ABCs of CSAs.* Laura DeLind, 1999. Slide show, on loan for \$10. Contact Laura DeLind, 517-355-7490 or [Laura.Delind@ssc.msu.edu](mailto:Laura.Delind@ssc.msu.edu).

*Combining Holistic Resource Management and Strategic Planning to Improve Farm Resource Planning* (ENC 97-21)

**Duration:** September 1997 - August 2000

**SARE Funding:** \$9,500

**Project Coordinator:** Craig Dobbins, Purdue University, Indiana, 317-494-9041, 317-494-9176 (fax), [dobbins@agecon.purdue.edu](mailto:dobbins@agecon.purdue.edu)

To provide extension specialists, county educators, Natural Resources Conservation Service personnel, and farmers an opportunity to learn more about holistic management, a multi-day workshop was held. An in-service training session on applying strategic planning to the farm business was conducted for county educators. In addition to providing an increased understanding of strategic planning, this session encouraged the formation of instructional teams to lead farmer workshops. *Positioning the Farm Business* resource materials, including visuals, references materials, and exercises, were developed for this session. Topics included the forces shaping production agriculture, the use of vision and mission statements in developing goals, and methods for implementing and monitoring the strategic plan.

#### **Information Product:**

*Positioning the Farm Business: Participants Manual.* Mike Boehlje, Alan Miller, and Craig Dobbins, 1999. Limited quantity available, free. Contact Craig Dobbins, 317-494-9041.

*Legal Guide for Farm Marketers* (ENC 97-20)

**Duration:** September 1997 - August 1999

**SARE Funding:** \$36,250

**Project Coordinator:** Neil Hamilton, Drake University Agricultural Law Center, Iowa, 515-271-2065, 515-271-2530 (fax), [neil.hamilton@drake.edu](mailto:neil.hamilton@drake.edu)

The goal of the project was to publish a comprehensive legal guide for farmers and agricultural professionals addressing issues associated with direct farm marketing. The project required extensive research and analysis of the legal con-

straints relating to direct farm marketing and a thorough understanding of the legal environment. *The Legal Guide for Direct Farm Marketing* was published in June 1999 by Drake University. The 235-page document includes 12 chapters on various direct marketing topics, as well as checklists, sidebars, court cases, and a 50-state appendix with more than 350 contacts. The book has received positive responses from farmers, government officials, educators, and others. More than 1,500 copies have been sold. Nearly 400 copies were distributed at North Central Region SARE's marketing conference in November 1999.

#### **Full Report Available**

#### **Information Product:**

*The Legal Guide for Direct Farm Marketing.* Neil Hamilton, Drake University Agricultural Law Center (DUALC), June 1999. Guidebook, \$20. Contact DUALC, 515-271-2947.

*Minnesota Sustainable Farming Association Chapter Networking* (ENC 97-19)

**Duration:** September 1997 - August 2000

**SARE Funding:** \$41,600

**Project Coordinator:** DeEtta Bilék, Sustainable Farming Association of Minnesota, 218-445-5475, 218-445-5673 (fax), [deebilek@wcta.net](mailto:deebilek@wcta.net)

This project expands the Sustainable Farming Association (SFA) of Minnesota's chapter networking project. Professionals from Extension, Natural Resources Conservation Service, and other organizations and agencies were invited to the on-farm, farmer-led events. Networking between agency personnel, conventional farmers, and farmer members of the 12 chapters of the SFA is the focus of this project. Five field days were held, hosted by four of the 12 chapters, with more than 200 people attending. Six workshops were held, hosted by five of the 12 chapters, with more than 300 people attending. The SFA's eighth annual statewide event, *Producer-Consumer Link — Making the Connection*, was held in March 1999 with 120 attendees. More than 200 names have been added to the SFA newsletter mailing list, including agricultural professionals, media contacts, and policy makers.

#### **Full Report Available**



*New Opportunities for Families on Small Farms* (ENC 97-16.1 see also ENC 99-45 and ENC 98-28)

**Duration:** September 1997 - August 1999

**SARE Funding:** \$30,000

**Project Coordinator:** John Ikerd, University of Missouri, 573-882-4635, 573-884-6572 (fax), ikerdj@missouri.edu

A comprehensive professional development experience was carried out in conjunction with the 1997 National *Small Farm Today* Conference and Trade Show in Columbia, Missouri. The *Small Farm* Conference is an annual event sponsored by the *Small Farm Today* magazine. A special professional development program preceding the opening day of the conference featured speakers, presentations, and discussions followed by a reaction panel discussion. Small groups of workshop participants were then given team assignments based on case studies representing different small farm situations. Forty-two people from seven different states attended the workshop. Surveys showed that the average rating for understanding and knowledge of workshop participants was 8.3 and the rating for usefulness was 8.3 as well, indicating a highly positive evaluation.

#### **Full Report Available**

*Self-Directed Participatory Agent Learning* (ENC 97-12.1, see also ENC 98-29)

**Duration:** September 1997 - August 2000

**SARE Funding:** \$53,700

**Project Coordinator:** Natalie Bement Rector, Michigan State University Extension, 616-781-0784, 616-781-0647 (fax), rector@msu.msue.edu

This third year of funding for Michigan State University Area of Expertise (AoE) Extension team members has allowed for the continuation of eight projects, the creation of new projects, and in-depth training in Michigan field crop ecology. Funds were allocated to 13 projects across the state, pursuant to the agent/farmer needs and cropping systems. Each agent reports

on their project to the entire AoE team at an annual training session. This alone has created accountability, cross programming, and improved communications between agents on projects. Another portion of the funds went to the planning and implementation of training using the publication *Michigan Field Crop Ecology*.

#### **Full Report Available**

##### **Information Product:**

*Michigan Field Crop Ecology: Managing biological processes for productivity and environmental quality.* Michigan State University Extension. Bulletin, 1998. Contact MSU Extension, 517-355-2308 or msue@msue.msu.edu.

*Sustainable Agriculture Distance Learning* (ENC 97-02.2)

**Duration:** September 1997 - August 1999

**SARE Funding:** \$57,700

**Project Coordinator:** Tom Hanson, North Dakota State University, 701-857-7679, 701-857-7676 (fax), thanson@ndsuext.nodak.edu

Objectives of this project included to expand Extension agents' and federal and state agency field staffs' understanding of critical sustainable agriculture topics and to offer high quality interactive instruction effectively and conveniently for instructors and students. Three training sessions have been completed: Holistic Resource Management with 65 participants, Alternative Marketing Methods with 51 participants, and Intensive Grazing Management with 27 participants. These sessions have used the two-way video systems in both Dakotas. Agents and others taking the training appreciated reduced travel distances. Evaluations have indicated a high degree of satisfaction with the material presented and the delivery system.

#### **Full Report Available**

## *Professional development grants*

### REFLECTIONS

*Tom Neuberger opens a freezer door to show customers his farm-raised meat products. Using a mobile meat market called the "Goosemobile," Neuberger, of Canistota, South Dakota, sells poultry, beef, pork, lamb, bison, goat and ostrich in southeast South Dakota. (FNC 98-216)*



*Neat rows grace the land on Lavinia McKinney's Brixey, Missouri farm, where she grows and markets Chinese and indigenous medicinal plants. (FNC 98-215)*



## *Professional development grants*



*Marla Spivak, at the University of Minnesota, is breeding bees to resist Varroa mites and other diseases in order to decrease reliance on pesticides and antibiotic use in bee hives. (LNC 97-117)*



*Working at the University of Missouri, Sandra Hodge is determining the effects on both trees and forage when cattle are rapidly rotated through small paddocks using management-intensive grazing in a black walnut plantation. A field tour shares promising results. (LNC 98-125)*



*Strengthening the Whole-Farm Planning Process through  
Producer-Agent Partnerships and Professional Development*  
(ENC 96-15)

**Duration:** October 1995 - July 1999  
**SARE Funding:** \$75,000  
**Project Coordinator:** Cris Carusi, (formerly) Nebraska Sustainable Agriculture Society, 402-254-2289, 402-254-6891 (fax)

The goal of this project was to build partnerships among farmers, ranchers, and agency personnel through classroom and on-farm training events so that they can learn how to build effective, whole-farm plans. Led by the Nebraska Sustainable Agriculture Society and the Sustainable Farming Association of Minnesota, this project trained 53 farmers, ranchers, non-profit representatives, Natural Resources Conservation Service agents and Cooperative Extension educators in the use of a site specific, goal-oriented planning model: Holistic Management. Ninety-two individuals participated in six follow-up workshops, which addressed communication and goal-setting, testing guidelines, biological and financial planning, and monitoring progress towards whole-farm plans. Thirty-seven participants were trained in the use of decision cases in whole-farm planning. Project participants will be interviewed about what they learned and how they have applied it to their work.

**Full Report Available**

*Utilizing the Concept of Whole-Farm Planning to Educate  
Agricultural Professionals and Farm Families in Ohio about  
Sustainable Agriculture* (ENC 96-13)

**Duration:** October 1996 - July 1999  
**SARE Funding:** \$32,000  
**Project Coordinator:** Mike Hogan, Ohio State University Extension, 330-627-4310, 330-627-0098 (fax), hogan.1@osu.edu

The three major components of this program were conducting the Whole-Farm Planning Introductory Workshop held in four Ohio locations, conducting statewide follow-up workshops on specific whole-farm planning tools, and developing a series of fact sheets on whole-farm planning. A total of 124 individuals learned about three goal-setting models and six decision-making tools at the introductory workshops. The follow-up meetings focused on Holistic Management, Farm\*A\*Syst, and Ontario Environmental Farm Plan. This two-day workshop was attended by 26 individuals from Extension, Natural Resources Conservation Service, Ohio Department of Natural Resources, and non-profit groups. The Ohio Whole-Farm Planning Guide included information on Goal-Setting, Organic Farm Planning, On-Farm Research, Holistic Management, and Monitoring Progress Toward Farm and Community Goals.

**Full Report Available**

In 1992, NCR SARE awarded the first round of sustainable agriculture grants to farmers and ranchers. Since then, hundreds of producers have initiated and directed on-farm research, education, and demonstration projects to improve their profits, boost their communities and quality of life, and enhance the environment.

Producer grant coordinators address site-specific problems in a wide variety of projects – from examining the economics of cover cropping to educating consumers about organic beef. Farmer and rancher grant recipients have reached an audience of more than 20,000 producers across the North Central region through field days, demonstrations, and information sharing.

We call for Producer proposals annually in February. Proposals are reviewed by a committee of farmers and ranchers that recommends projects to the NCR SARE Administrative Council. Project funding is usually available in early fall. Awards range from \$500 to \$5,000 for individual farmers and up to \$15,000 for groups of producers. On average, 45 Producer Grants are funded annually at a total of nearly \$250,000. Additional funds have been provided by the USDA's National Agroforestry Center. The USDA Agricultural Marketing Service will provide funds for Producer Grants in 2000.

The following Producer Grants, arranged by category, were funded in 1998, active in 1999, and visited by our Producer Grant Program Coordinator Ken Schneider. Each entry includes the project title, project number, funding, and project coordinator. For more information, contact the project coordinator or request full reports from the NCR SARE office. Some projects have developed information products that can be ordered, as listed. You can also contact Ken Schneider at 402-472-0809 or [kschneider1@unl.edu](mailto:kschneider1@unl.edu).

## Producer Grants

### *Animal Production*

*Expanding Partnerships between Southern Michigan Cash Crop Farmers and Northern Michigan Livestock Farmers (FNC 98-202)*

**SARE Funding:** \$5,000

**Project Coordinator:** Henry Miller, Constantine, Michigan, 616-279-2151

Cover Crops not only provide erosion control, but they may also provide excellent winter forage for livestock. The objective of this project was to explore the economic feasibility of grazing cover crops and the impact that the practice would have on future crop production. With spinner seeders, the project coordinator seeded cover crops of brassicas and oats following specialty crops of seed corn, snap beans, and potatoes. Cattle grazed the oats late September through November and the brassicas December through early April. Pasture value of the cover crops ranged from \$14 to \$30 per acre. The cattle gained approximately 1.8 pounds per day and were supplemented only during bad weather. Crop yields following the cover crops were insignificant compared to control strips. An environmental benefit was the even distribution of manure on land that would normally receive no manure.

### **Full Report Available**

*Sustainable Hog Production in Old Farm Buildings (FNC 98-208)*

**SARE Funding:** \$4,770

**Project Coordinator:** Dave Serfling, Preston, Minnesota, 507-765-2797

To minimize overhead and capital investment, producers can combine new technology and old structures. The objective of this project was to demonstrate the conversion of an old barn into a deep straw, naturally ventilated wean-to-finish swine facility. The coordinator converted an old hip roof building into a modern, deep straw growing and finishing facility for

# Producer Grant Program

## REFLECTIONS

*Pam Bosserd's Marshall, Michigan farm stand attracts customers with a variety of colors, scents and horticultural products.*  
(FNC 98-204)



*A trellis on Lavinia McKinney's farm holds up one of her many horticultural crops. McKinney organically produces Chinese and indigenous medicinal plants for high profits in Brixey, Missouri.*  
(FNC 98-215)





## *Producer grants*



On Greg Williamson's Porterfield, Wisconsin farm he monitors forage quality during the grazing season. Working with his county Extension agent and neighbors, he is documenting the direct correlation between seasonal changes in forage quality and supplementation and milk production. (FNC 98-228)



Gary Manley is studying effects of cover crops on soil quality, soil arthropod densities, and biodiversity on his Three Rivers, Michigan farm. Cover crops interseeded in corn and soybeans have increased both density and diversity of arthropods. Grain yields were highest on plots treated with cover crops. (FNC 98-236)

swine. He used straw insulation in the attic, large solar doors, chimney ventilation, a watering system, and fence line feeders. Hogs have access to an outdoor area. After farrowing, sows with 3- to 4-week-old pigs are placed in the building. At 9 weeks of age the pigs are weaned and the sows are removed. The coordinator keeps pigs in the building until finish at 6 months and 240 pounds. No additional heat is needed in the winter and no antibiotics are used. Tails are left intact. Death loss was less than 1 percent.

### **Full Report Available**

*Keep the Cows in the Corn Even During the Winter Storms*  
(FNC 98-210)

**SARE Funding:** \$4,997

**Project Coordinator:** Donald Struxness, Milan, Minnesota, 320-734-4877

Grazing crop residue can provide both economic and environmental benefits for cow-calf operations in the North Central region. The objective of this project was to graze beef cattle in the corn fields throughout the winter in western Minnesota. The coordinator's long-range plan involves trees for shelter belts and windbreaks. Short-range plans include using 10- by 20-foot snow control panels set to form 90-degree wedges into prevailing winds. The panels are placed around watering sites and in grazing areas. Early winter results look promising, with cattle doing well even with wind chills of -50 degrees. The project was extended six months to complete the winter grazing season and compile data.

*Removal of Infected Fescue with Warm-Season Grasses and Introduction of Legumes* (FNC 98-211)

**SARE Funding:** \$1,738

**Project Coordinator:** Von R. Dole, Queen City, Missouri, 660-766-2408

Warm-season grasses and legumes can play an important role in enhancing summer weight gain on yearlings and calves. The objective of this project is to increase summer weight gains by inter-seeding legumes and replacing some endophyte-infected fescue with warm-season grasses. The coordinator is replacing one-third of his fescue pastures with native, warm-season grasses, such as big bluestem, switchgrass, and

Indiangrass. He inter-seeded clover in the remaining pastures. The project was extended for one year to allow time for establishment of new seedings and data collection.

*Will Rotational Cutting of Clover Increase the Quantity and Quality of Honey in a Specific Habitat?* (FNC 98-212)

**SARE Funding:** \$3,347

**Project Coordinator:** James Harlow, Exeter, Missouri, 417-652-3301

Habitat enhancement can have a positive impact on honeybee populations and honey production. The objective of this project is to demonstrate that rotational cutting of the habitat will increase honeybee populations, create healthier bees, and enhance quantity and quality of honey. By rotational cutting the coordinator hopes to provide a constant source of nectar for the entire season. Due to loss of lease on clover land, he changed plans and substituted newly seeded alfalfa to conduct the project. The rotational cutting was not possible in 1999; therefore, the project was extended one year to gather data.

*Inter-Seeding Legumes into Fescue* (FNC 98-219)

**SARE Funding:** \$1,455

**Project Coordinator:** Tom Mulroy, Mayetta, Kansas, 785-364-4505

High quality pastures are key to maintaining growth and health of animals in livestock grazing systems. The objectives of this project are to lessen the need for commercial fertilizer and reverse the negative impact of endophyte-infected fescue pastures in beef cattle production. The coordinator used a no-till drill to inter-seed legumes into fescue pastures, ran soil tests prior to seeding and after establishment, gathered data on forage quality and quantity, and compared pre- and post-seeding cattle gains. A dry spring and summer resulted in poor stands of newly seeded legumes. The coordinator reseeded in the autumn of 1999, and the project was extended for one year for establishment of new seedings and data collection.

*Establishing On-Farm Management Systems for Grass-Fed Beef (FNC 98-223)*

**SARE Funding:** \$4,980

**Project Coordinator:** Doug Erickson, Massena, Iowa, 712-799-3399

Efficient production of quality livestock requires excellent management of feed, water, and pests. The coordinator's objective is to produce grass-fed beef by focusing on pasture management, insect and parasite control, and enterprise budgeting. He developed a fencing plan that considered soil, water access, handling facilities, terrain, and stocking rate. He also monitored plant diversity and forage quality and quantity. Plans included introducing dung beetles to reduce parasite and insect breeding, but because of the lack of availability of beetles and adverse weather conditions, the project was extended for one year.

*Economically Powered Water Supply Systems for Remote Locations (FNC 98-224)*

**SARE Funding:** \$3,372

**Project Coordinator:** Donn Teske, Wheaton, Kansas, 785-396-4542

Proper water distribution is crucial to efficient grazing systems. The objective of this project is to use natural farm assets to establish a water distribution system that will enhance pasture utilization and reduce erosion from cattle trails. The coordinator is developing a small mobile windmill connected to a squeeze pump that pumps water from farm ponds to a large supply tank located at the highest elevation on the ranch. Water is then gravity-fed to paddocks. The first prototype, a horizontal windmill, was somewhat successful, but the capacity was insufficient. The coordinator will test a small vertical windmill in 2000 that will have enough capacity to supply the demand. The project was extended for one year.

*Quantifying Seasonal Nutritional Quality Changes in Managed Pastures (FNC 98-228)*

**SARE Funding:** \$5,000

**Project Coordinator:** Greg Williamson, Porterfield, Wisconsin, 715-789-3060

Understanding seasonal changes in forage quality is essential for proper supplementation of lactating dairy cattle in rotational grazing systems. The objectives of this project are to monitor forage quality changes over the course of a grazing season, to learn which forage mixes allow for effective management of summer slumps, and to develop an easy method to estimate standing forage quantity and quality. The coordinator and two neighbors have been working with their county extension educator for three years by taking weekly samples from pastures in rotational grazing systems, conducting wet chemistry analysis on the samples, and equating milk production to forage quality. Early data confirm the direct relationship between seasonal changes in forage quality, supplementation and milk production. Data also show that some breeds of dairy cattle are more sensitive to changes in forage quality than others. The project was extended for six months to compile and analyze data.

*Don't Take Grass for Granted (FNC 98-229)*

**SARE Funding:** \$1,997

**Project Coordinator:** Jack Orts, Oriska, North Dakota, 701-845-2331

Properly managed grazing systems have positive impacts on range condition, water and soil quality, and wildlife habitat, as well as meat and milk production. The objective of this project is to develop a management-intensive grazing system to produce grass-fed beef and enhance wildlife habitat. To improve carrying capacity on his ranch, the coordinator is using high-tensile fencing, a gravity-fed water distribution system, and inter-seeding of legumes and desirable grasses. The project was extended for one year to complete the water system and collect data.



## Producer grants

### REFLECTIONS

*Pam Bosserd holds a map of Michigan to show school children the variety of agricultural products grown in her home state. Bosserd directed a SARE grant to transition from a traditional grain and livestock farm to an on-farm produce market in Marshall, Michigan. (FNC 98-204)*



*A rural road leads to Lavinia McKinney's farm in Brixey, Missouri. McKinney organically produces Chinese and indigenous medicinal plants for high profits. (FNC 98-215)*



## *Producer grants*



*A country landscape offers open spaces and diversity at Thomas Robinson's Middleville, Michigan farm. Robinson is providing physically challenged people accessibility to his You-Pick blueberries and a hunting area.  
(FNC 98-213)*



*A sign on Pam Bosserd's Marshall, Michigan farm reads: "Farmers touch lives every day." Bosserd, in transitioning from a traditional grain and livestock farm to a direct marketing enterprise, is educating school children – and their parents – about sustainable agriculture.  
(FNC 98-204)*

*Swath-Grazing: A Potential Alternative to Hay Feeding for Wintering Beef Cows (FNC 98-232)*

**SARE Funding:** \$2,955

**Project Coordinator:** Mark Sip, Geddes, South Dakota, 605-337-3598

Reducing winter feed costs for beef cows, while maintaining cow condition, is crucial to profitability. The objective of this project was to evaluate swath-grazing as a means of reducing wintering costs for beef cows in the Northern Plains. Swath-grazing, a practice developed in Canada, is reported to reduce wintering cost by 50 percent. The coordinator planned to plant a small grain crop following wheat harvest in mid-July or early August that would be swathed into windrows in late fall and left to be grazed by beef cows during the winter. He planted winter rye after harvesting wheat around September 1. With the late date and dry fall, the amount of forage production did not warrant the expense of swathing. Consequently, the project was unsuccessful for winter grazing. However, the winter rye did provide 2,690 pounds of dry matter per acre for spring grazing, at a cost of \$44.19 per ton in the windrow.

#### **Full Report Available**

*Trout and Walleye Production in Freshwater Springs in Illinois (FNC 98-235)*

**SARE Funding:** \$4,834

**Project Coordinator:** Michael Rahe, Jacksonville, Illinois, 217-242-9508

Freshwater springs can enhance income and provide recreation when properly managed. The objective of this project is to convert a freshwater spring into a productive and profitable aquaculture enterprise. The coordinator excavated and constructed dams to create two ponds to trap water from a cold water spring. Pond construction delayed stocking until November 1999. He stocked the upper pond, that had the coldest water, with rainbow trout and the lower pond with small mouth bass. Walleye were not receptive to commercial fish food. The project will be extended one year to gather data on fish survival and growth. If survival and growth rates are satisfactory, the coordinator will produce fish for commercial markets and to accommodate fee hunting clients.

#### **Information Product:**

*Springview Acres.* Video, contact Michael Rahe, 217-242-9508

#### **Crop Production**

*Wolf's Native Garden Project (FNC 98-201)*

**SARE Funding:** \$4,160

**Project Coordinator:** Charlie Smoke, Kyle, South Dakota, 605-455-2321

Reconnecting Native Americans to the land and to native diets is an important step in restoring health, pride, and self reliance. The objective of this project is to encourage Indian people to start gardens using native crop varieties. The project coordinator will establish gardens with Native American crops and help local colleges, Extension offices, radio stations, and community groups to conduct field trips to educate Native Americans on the value of indigenous crops. The project was delayed due to weather-related problems and was extended for one year.

*Deer Damage Abatement Research Project (FNC 98-205)*

**SARE Funding:** \$3,627

**Project Coordinator:** Gary Mensinger, Camanche, Iowa, 319-259-1160

As deer populations increase, loss of young trees to deer predation is becoming a major problem in establishing agroforestry practices. The objective of this project is to evaluate the effectiveness of sessile baling twine in reducing deer damage to young trees. The project coordinator loosely wrapped the top 6 inches of the leaders on fifty 3-foot oak and walnut trees with sessile twine. Another fifty trees were left unwrapped. Trees wrapped with sessile in September 1998 were checked for damage in mid-February and mid-March of 1999. By March 17, sessile-wrapped trees exhibited 7.8 percent leader damage versus 52 percent leader damage on controls. Both exhibited about 85 percent lateral limb damage. The coordinator also compared sessile twine fencing, electric fencing, and a control strip for tree damage on approximately 300 saplings. The damage assessment in the fenced areas is on-going, and the project was extended one year for additional data collection.



*Alternative Use for Small Tobacco Acreage in Southeastern Indiana (FNC 98-206)*

**SARE Funding:** \$3,270

**Project Coordinator:** Denise Dailey, Deputy, Indiana, 812-873-6835

With the reduction in their allotments, producers of burley tobacco have been forced to seek alternatives to replace lost income. The objective of this project is to use tobacco land and facilities to produce alternative, high-income crops. The coordinator spent months exploring options before deciding to use existing land and equipment to produce asparagus, lettuce, greens, and cut flowers for upscale markets. The coordinator markets greens and lettuce twice a week to restaurants in Louisville, Kentucky, and Columbus, Indiana. Thirty percent of the restaurants she has contacted are steady customers. If winter production proves successful, she will solidify her position as a dependable, year-round supplier of high-quality greens and lettuce. Asparagus and cut flowers are marketed locally in season.

**Full Report Available**

*Enhancing Native Bee Populations for Pollination (FNC 98-209)*

**SARE Funding:** \$4,700

**Project Coordinator:** John Cuddy, Maiden Rock, Wisconsin, 715-594-3648

Recent declines in honeybee populations have encouraged producers to search for alternative sources for pollination. The objective of this project was to increase on-farm populations of native solitary bee species in order to enhance pollination of fruit and specialty crops. The coordinator provided nesting habitat for the native bee species with solitary bee nesting blocks and nest boxes filled with nesting tubes. He constructed the nesting blocks of oak, basswood, and elm with 5/16 holes drilled 4 to 6 inches into the blocks. The 5/16 cardboard nesting tubes were stacked in rain-proof containers. The coordinator deployed the nesting structures in blueberry fields and around the farmstead. Orchard mason bees were also purchased and released. Observations in the blueberry

fields showed increased activity by the solitary bees, especially during cool weather. Data revealed that native bee populations increased almost 500 percent the first year.

**Full Report Available**

**Information Product:**

Rush River Produce website, [www.rushriverproduce.com](http://www.rushriverproduce.com).

*Alternate Vegetable Crop Irrigation System for Remote Areas (FNC 98-214)*

**SARE Funding:** \$2,110

**Project Coordinator:** Kevin Smyth, Amesville, Ohio, 740-448-2228

Adequate moisture from natural precipitation or irrigation is critical for the successful production of quality produce. The objective of this project was to demonstrate an unconventional irrigation system for commercial vegetable growers in remote locations lacking water and electrical utilities. In an area with no public utilities and very little ground water, the coordinator installed a drip irrigation system for his commercial vegetable farm by using a French drain for water collection, underground and above ground storage tanks, a solar-powered pump to move the water to above ground storage, and gravity-fed drip lines. The French drain provided a minimum of 15 gallons of water per hour during the summer drought, which was more than adequate to irrigate the 3-acre community-supported agriculture farm.

**Full Report Available**

*Chinese Medicinal Herbs as Field Crops in the Ozarks (FNC 98-215)*

**SARE Funding:** \$5,000

**Project Coordinator:** Lavinia McKinney, Brixey, Missouri, 417-261-2393

With the growing popularity of herbal medicine, medicinal plants can provide an alternative income for some producers in the North Central region. The objective of this project was to increase organic production and marketing of the Chinese

## *Producer grants*

*John Thurman stands next to a part of his chicken processing equipment. Thurman, in Hopkins Park, Illinois, is comparing economics and labor of free-range versus pastured poultry systems. (DNC 98-05)*



*At the University of Minnesota, Marla Spivak is breeding bees to resist Varroa mites and other diseases in order to decrease reliance on pesticides and antibiotic use in bee hives. (LNC 97-117)*



REFLECTIONS

## *Producer grants*



*Denise Dailey found asparagus, lettuce, greens, and cut flowers to be viable alternatives to tobacco on her Deputy, Indian farm. She markets produce to restaurants in Louisville, Kentucky and Columbus, Indiana.  
(FNC 98-206)*



*In Constantine, Michigan, Henry Miller measures growth on a brassica that will serve as a forage source in his cattle grazing system.  
(FNC-98-202)*



medicinal *Astragalus membranaceus* in an economically depressed area where clear cutting of timber stands is decimating native plant populations. The coordinator established a half acre of new seedlings and purchased a root digger and harvested five plots (1/6 acre) of 1994 plantings. She harvested seed in 1998 and 1999 and roots in 1999. The five plots averaged 1 pound of seed per year and about 18 pounds of dried root. Although production costs are high, rewards can be substantial with aggressive marketing.

#### **Full Report Available**

##### **Information Product:**

Elixir Farm website, [www.elixirfarm.com](http://www.elixirfarm.com).

*Alternative Nitrogen Sources for Organic Snap Bean Production (FNC 98-217)*

**SARE Funding:** \$3,617

**Project Coordinator:** John Ellis, York, Nebraska, 402-362-2630

Maintaining nutrient levels and balance for various crops in an organic system can prove challenging. The objective of this project is to develop organic production techniques for snap bean production in eastern Nebraska. The coordinator established test plots to examine options to supply nitrogen for snap beans and improve soil nitrogen for following crops in an organic system. Options included use of ground alfalfa, clover for green manure, blood or feather meal, and a control strip. The demonstration was cut short by a severe hailstorm that destroyed the bean crop, and the project was extended for one year.

*Chariton Valley Beef Industry Initiative: Producer Cost-Share for Technology Adoption and Market Access (FNC 98-226)*

**SARE Funding:** \$9,875 (group grant)

**Project Coordinator:** Mike Hunter, Chariton, Iowa, 515-774-4136

Adapting to changes in the marketplace can provide substantial premiums to livestock producers. The objective of this project was to improve the marketing ability of producers in southern Iowa. The project was set up to enable producers to access, collect, interpret, and respond to information and take

advantage of evolving value-added opportunities. The producers conducted field days and attended seminars on animal identification, source verification, and carcass data interpretation. They identified and collected carcass data on 5,135 head of cattle from 68 producers. The data provided them with a stronger position and greater flexibility in marketing. They were able to market finished cattle in value-based grids, which has resulted in average premiums of \$20 per head. The data also helped feeder cattle producers obtain higher prices for calves and yearlings.

#### **Full Report Available**

*Sugar Maple Control and Hardwood Restoration in Central Illinois Woodland (FNC 98-231)*

**SARE Funding:** \$5,000

**Project Coordinator:** Kevin Green, Fithian, Illinois, 217-354-4030

Small woodlots can provide additional income and excellent wildlife habitat with proper management. The objective of this project was to restore an oak/walnut/hickory forest in eastern Illinois for income-producing lumber and nuts. To control encroachment of sugar maples, the coordinator used prescribed burning and spot spraying for saplings and girdling for trees up to 6 inches in diameter. He is marketing sugar maples over 6 inches in diameter for lumber and firewood. After removal of the maples, reforestation with desirable hardwoods is being accomplished by natural methods and hand planting. The project has been extended one year to gain additional data.

*Low Environmental Impact Establishment of Hybrid Poplar Plantation (FNC 98-234)*

**SARE Funding:** \$2,790

**Project Coordinator:** Michael Nohner, Watkins, Minnesota, 320-453-2830

Agroforestry can provide an environmentally friendly alternative to row crops on marginal lands. The objective of this project is to establish a hybrid poplar plantation using only mechanical means for weed control to reduce environmental impact on lands in a sensitive waterfowl area. The coordinator established test plots on 10 acres of marginal row crop land to

evaluate three different hybrid poplar cultivars. Planting was conducted utilizing a 10- by 6-foot grid pattern to facilitate mechanical weed control. Trees planted in the spring got an excellent start with weeds controlled by cultivation. The trees showed the benefits of non-chemical weed control, exhibiting significant growth from August through October. They grew 4 to 6 feet high by November. After the second year the canopy formed by the trees will eliminate the weed competition, and no further cultivation will be required. Plans are to harvest trees for pulp at 10 years of age when they reach 10 to 12 inches in diameter.

#### **Full Report Available**

#### *Expansion of Grape Production (FNC 98-237)*

**SARE Funding:** \$4,940

**Project Coordinator:** Marchell Baehr, New Salem, Illinois, 217-285-2215

Grape production is returning as an alternative income crop in the North Central region. The objective of this project is to increase grape production in Pike County, Illinois, and surrounding areas to boost the local economy. The project coordinator, with assistance from the local Resource Conservation and Development District and the University of Illinois, initiated a grape production project by planting five acres of old and new varieties of grapes, including Catawba, Vignoles, Chamborcin, and Norton. The grant helped him with planting and trellis construction on an additional 5 acres planted with 22 different varieties to be tested for overall adaptability. Long range plans are to dedicate 40 acres to grape production. The coordinator is keeping detailed records for growth, resistance to disease, yield, and grape quality. Several other local landowners have begun to establish vineyards, and an Illinois Grape Growers Co-op has been created to promote production and sale of Illinois wines and eventually to establish a local winery.

#### **Full Report Available**

#### *Utilizing Alternative Methods for Silage Harvest and Storage (FNC 98-240)*

**SARE Funding:** \$5,000

**Project Coordinator:** David McCartney, Coleman, Michigan, 517-465-6231

Minimizing overhead is a key ingredient to maximizing profits for smaller producers. The objective was to introduce lower cost methods of harvesting and storing forage and to reduce capital investment of harvesting and feeding equipment. The coordinator used technology developed in New Zealand to harvest and store silage on his central Michigan dairy farm. The technology included a lacerator and a multi-purpose forage wagon for harvest and a plastic-covered, vacuum-sealed system for storage. The lacerator is a flail-type, direct-cut harvester that can be used to fill a silage wagon or to create a windrow for bailing. The multi-purpose forage wagon with front and rear discharge can also be used as a feeder wagon. The coordinator piles direct-cut forage, covers it with 40- by 100-foot plastic sheets, seals the edges, and uses a vacuum pump to remove the air. Final data revealed the New Zealand direct-cut system can reduce capital investment and lower operational costs while allowing the producer to harvest in a single trip across the field, thereby reducing weather risk.

#### **Full Report Available**

#### **Information Product:**

*Utilizing Alternative Harvesting Methods.* Video, contact David McCartney, 517-465-6231

#### *Sustainable Viticulture for Midwestern Fruit Growers (FNC 98-241)*

**SARE Funding:** \$5,000

**Project Coordinator:** Gene Sigel, Madison, Ohio, 440-466-3485

French hybrids, viniferas, and other wine grapes exhibit greater sensitivity to wet, cold winters than the more traditional table and juice grape varieties. The objective of this project was to demonstrate that intensive tile drainage, combined with new hybrid grape varieties, can increase net

## *Producer grants*

*John Klueh, in Mount Pleasant, Indiana, is experimenting with American bittersweet to extend his growing season and add income to his small woodland farm. (FNC 97-195)*




*Scenery on the Henry Miller farm in Constantine, Michigan. Miller is experimenting with grazing cover crops. (FNC-98-202)*



REFLECTIONS



## *Producer grants*



***Eagle View Family Farm***

***Naturally Raised Beef and Pork Products***

***[www.eagleviewfarm.com](http://www.eagleviewfarm.com)***

Brett Hampton

Dennis and Sue Rabe, of Lake City, Minnesota, received a SARE grant to help them promote their beef and pork products to Rochester-area restaurants and supermarkets. (FNC 98-220)

income over traditional Concord grape farming. The project coordinator is using intensive tile drainage to enhance winter hardiness and production for the newer hybrids and old world viniferas. The demonstration is being conducted on 18 newly planted rows. One set of nine rows has tile placed every other center, 18 feet apart at a depth of 24 inches. The other nine rows have tile placed in each center, 9 feet apart at a depth of 24 inches. The project will compare growth, yield, and winter hardiness of the plants at different tile spacing. Early observations are very positive, but a final analysis will require several years of observation and data collection.

#### **Full Report Available**

*Kura Clover Cover Crop Demonstration (FNC 98-242)*

**SARE Funding:** \$1,290

**Project Coordinator:** Dan Byrnes, Waukon, Iowa, 319-568-3381

Kura clover as a permanent cover crop may provide forage and soil nitrogen and also conserve soil and water. The objective of this project is to test kura clover as a permanent ground cover in the production of corn silage. The coordinator direct-seeded three plots of kura clover, a rhizomatous legume, without a nurse crop for a three-year study. The coordinator established the clover in year one and hayed and grazed it in year two. The plots will be burned down with a modest application of Roundup in year three. Eighteen-inch strips will be treated with another application of Roundup and no-till drilled into corn. The coordinator hopes the clover will re-establish in the 18-inch strips without impacting silage yield. If the demonstration is successful, the rotation will consist of one year of silage corn followed by two years of haying and grazing. The project was extended for one year to complete the rotation and assimilate data.

#### ***Disease and Pest Management***

*Biological Control of Pests (FNC 98-207)*

**SARE Funding:** \$2,089

**Project Coordinator:** David Kreutz, Aurora, Nebraska, 402-694-2686

Biological solutions to weed and insect control are gaining popularity as producers try to reduce inputs while maintaining

yield. The objective of this project was to develop a cropping system that will provide biological control of European corn borer. The coordinator inter-cropped strips of alfalfa with corn to provide habitat for beneficial predator insects to control corn borer and other pests. He sprayed sugar and yeast on alfalfa to enhance insect populations and used sticky traps and sweep nets for population evaluation. High school students took population counts of both predator and beneficial insects. Researchers from the University of Nebraska-Lincoln assisted with identification of the captured insects. The data has not been fully analyzed. However, early results indicate that if alfalfa is harvested in a timely fashion (early bloom), the nectar supply may not be adequate to enhance beneficial insect populations. The coordinator is considering an alternate legume in narrower strips next season.

*Results of Alternate Usage of Apistan Strips and Formic Acid for Mite Control in Honeybee Colonies (FNC 98-230)*

**SARE Funding:** \$4,951

**Project Coordinator:** Kathy Hawthorne, Rayville, Missouri, 816-836-5309

Effective mite control can help restore honeybee populations, increase honey production, and enhance pollination of crops. The objective of this project was to evaluate the success of alternating the use of formic acid and apistan strips for control of *Varroa* mites in honeybee colonies. The coordinator used 50 hives in the demonstration. Twenty-five hives received only apistan treatments in early April and late August. The other 25 received an apistan treatment in April and a formic acid treatment in late August. Mite control was somewhat better in hives treated with formic acid. Honey production was about equal in both treatments. The project was extended three months to gather data on winter survival and mite infestation.

#### **Full Report Available**

*Honeybee Varroa Mite Control Research and Langstroth versus Top Bar Hive Economics (FNC 98-238)*

**SARE Funding:** \$4,797

**Project Coordinator:** Robert Cessac, Higbee, Missouri, 660-248-1076

Affordable, healthy bee populations are critical to ensure pollination of fruit, vegetable, and forage crops in the North Central region. The project objectives were to compare Food Grade Mineral Oil (FGMO) with apistan strips for control of Varroa mites and to compare economics of the Top Bar hive with the traditional Langstroth hive. The coordinator used 12 Langstroth hives and 12 Top Bar hives, treating five of each with FGMO, five with apistan and one each as a control hive. Mite counts are taken periodically. The coordinator is collecting data on honey and wax production and economics of the two types of hives. Early data was inconclusive due to low bee populations in the new hives. The project was extended one year to increase bee populations in the new hives and to gather additional data.

### ***Economics and Marketing***

*Southwest Michigan Marketing Plan for Locally Grown Produce (FNC 98-203)*

**SARE Funding:** \$10,000 (group grant)

**Project Coordinator:** Phillip Prillwitz, Eau Clair, Michigan, 616-461-4276

In order for smaller producers of fruits and vegetables to capture the local supermarket business, growers must assure volume deliveries and identify products with labels. The objectives of this project were to develop and implement a marketing plan to differentiate between local and shipped-in produce, establish a consortium of local growers to market under a common label, and target Michigan consumers to support and request locally grown produce. The goal is to develop a container and label for exclusive use of growers in the consortium, pack the container only with premium quality produce, and provide the volume to meet chain store needs. The project has been extended to allow additional time to meet the goals of the project.

*On-Farm Market for High Quality, Locally Grown Products and an Experience for School Children (FNC 98-204)*

**SARE Funding:** \$4,490

**Project Coordinator:** Pamela Bosserd, Marshall, Michigan, 616-781-4905

Recognizing and using available resources can provide a viable alternative to conventional farming. The objectives of this project are to capitalize on location and family abilities to transition from a traditional livestock and grain farm to an on-farm produce market. The coordinator wants to be competitive with local grocery stores and to connect parents and children to their food supply. The coordinator is striving to produce high quality fruits and vegetables for an in-season roadside market and to use a greenhouse for fresh produce out-of-season. She is developing curriculum for children, centered around a pizza garden, pumpkin patch scavenger hunt, and corn maze in the shape of Michigan with signs describing products grown across the state. Increased customer base, greater variety of produce, and mutual benefits of the urban-rural connection are allowing the project coordinator to realize the goal of making the on-farm produce market a viable component of the operation.

### **Full Report Available**

*You-Pick for the Handicapped (FNC 98-213)*

**SARE Funding:** \$5,000

**Project Coordinator:** Thomas Robinson, Middleville, Michigan, 616-795-9758

Providing access for the handicapped can be beneficial for the producers as well as disabled people. The objective of this project is to provide the physically challenged accessibility to You-Pick blueberries and hunting areas. The coordinator will build a boardwalk through soft, uneven terrain to provide wheelchair accessibility to blueberries and to a lagoon and wooded area full of waterfowl and deer. Due to environmental concerns related to the use of wolmanized wood, the project was delayed for one year so the coordinator could locate environmentally friendly construction material at an affordable cost.



## Producer grants

At the University of Wisconsin, Joshua Posner is leading a project to increase the sustainability of Midwestern farming systems by diversifying the corn-soybean rotation with small grains. Production and economic data is being collected and analyzed from 27 Midwestern farms. (LNC 97-116)



Farmers, researchers, and Extension personnel participated in research design teams to develop protocols for a long-term investigation of changes during transition to organic and low-input field crop systems. Dale Mutch coordinates this Michigan State University project. (LNC 97-112)



REFLECTIONS

## *Producer grants*



*To control bacterial diseases in vegetable crops, Sally Miller at Ohio State University is studying production of healthy transplants with negligible bacterial pathogen loads, followed by field applications of biological control agents or low-risk synthetic compounds.*

*(LNC 98-141)*



*At the University of Wisconsin, Joshua Posner is leading a project to increase the sustainability of Midwestern farming systems by diversifying the corn-soybean rotation with small grains and a legume cover crop. Production and economic data is being collected and analyzed from 27 Midwestern farms.*

*(LNC 97-116)*



*The Expansion of the South Dakota Goosemobile Project to Include Beef, Pork, and Lamb (FNC 98-216)*

**SARE Funding:** \$9,025 (group grant)

**Project Coordinator:** Tom Neuberger, Canistota, South Dakota, 605-296-3314

A variety of products can attract new customers and increase sales at farmers markets and other direct marketing outlets. The objective of this project was to market pastured beef, lamb, pork, and a variety of other meats, as well as free-range poultry, through a mobile meat market called the "Goosemobile." The coordinator used a 26-foot cargo trailer pulled by a pick-up truck and retro-fitted with eight freezers containing varieties of frozen, vacuum-packed meat cuts and poultry. Summer sales were limited to a farmers market in eastern South Dakota, while autumn/holiday sales included a route across South Dakota. The producers sold poultry, beef, pork, lamb, bison, goat, and ostrich. With the addition of red meats, overall sales increased by 16 percent. However, poultry sales experienced a decline from the five-year average.

**Full Report Available**

*Specialty Meats Marketing Project at Sycamore Street Market (FNC 98-218)*

**SARE Funding:** \$9,984 (group grant)

**Project Coordinator:** Phil Hueneke, Bellevue, Iowa, 319-872-4327

Direct sales and added value show promise for small producers trying to maintain economic viability. The objective of this project was to develop and promote a local market for specialty meats produced in northeast Iowa. The original plan was to establish a meat business at Sycamore Street Market, a year-round public market in downtown Waterloo, Iowa. However, circumstances necessitated utilizing the Waterloo/Cedar Falls Farmers Market instead. The group marketed beef, pork, lamb, ostrich, and bison and educated consumers about health benefits of meats raised in a humane environment without hormones and antibiotics. The project team also sold products directly to health food stores in Iowa, Illinois, and Wisconsin. The project was extended to develop promotional material and expand sales.

*Beef Alliance Association to Develop a Premium Market (FNC 98-220)*

**SARE Funding:** \$3,650

**Project Coordinator:** Larry Becker, Lancaster, Kansas, 913-847-6895

The objective of this project is to form a beef alliance association, whereby cow/calf producers in northeast Kansas cooperate to breed, feed and market their cattle for a premium price. Alliance member producers attended meetings, conducted by Kansas State University research and extension personnel, related to record keeping with Standardized Performance Analysis (SPD). They visited the Meat and Animal Research Center in Clay Center, Nebraska, and attended grazing workshops to help them produce cattle with proper genetics and uniformity to command premium prices, either as feeder cattle or high quality finished cattle. Members have begun implementing some of the necessary practices and are

*Creating and Expanding Direct Markets for Sustainable Products (FNC 98-221)*

**SARE Funding:** \$5,000

**Project Coordinator:** Dennis Rabe, Lake City, Minnesota, 651-345-4915

As profit margins dwindle, farmers and ranchers are adding value by processing and direct marketing. The objective of this project was to increase marketing of naturally raised beef and pork products. The coordinator surveyed customers and offered free samples at farmers markets, co-ops, and convenience stores. He obtained information on customer product and packaging preferences and created posters and brochures depicting his products. Free samples seemed to be the best promotional tool, while the Rochester Farmers Market proved to be a successful marketing outlet, with sales averaging \$700 per week. Another successful outlet was a local supermarket selling 30 pounds of specialty sausages each week. Overall, the project increased the producers income by 30 percent.

**Full Report Available**



### *Creating Value in Pooled Cull Cow Sales (FNC 98-225)*

**SARE Funding:** \$10,000 (group grant)

**Project Coordinator:** Myron Runft, Belleville, Kansas, 785-527-5047

Creative marketing can be the difference between profit and loss. The objective of this project was to develop and expand a group marketing program for cull cows in north central Kansas. The coordinator wanted to research and identify potential markets for cull cows, survey groups of producers to determine interest in participation, coordinate and organize load lots of cows for market, and furnish kill sheet information to individual producers. The producers have moved more than seven semi-loads of cows, completed a farm/ranch survey, developed a formal system for coordinating cull cows, and created flyers and a logo. The project was extended to increase participation and compare pooled cow sales with other marketing options.

### *Organic Livestock Marketing Co-op (FNC 98-233)*

**SARE Funding:** \$10,000 (group grant)

**Project Coordinator:** Ron Rosmann, Harlan, Iowa, 712-627-4653

Market access is essential to effective marketing of organic production. Objectives of this project were to establish a statewide specialty and organic meat marketing group, as a separate division of the Heartland Organic Marketing Cooperative, to access new markets. The group planned to hire a consumer and market research consultant and pursue the most suitable markets. They were not able to use the Heartland Cooperative to market organic beef because they did not have enough producers with certified herds, thereby limiting the volume of organic beef. Some of the certified members created a business to market on a smaller scale while they re-examine a market that will best utilize current production. The project will be extended for one year.

### *A Consumer-Driven System to Natural Beef Marketing (FNC 98-239)*

**SARE Funding:** \$9,449 (group grant)

**Project Coordinator:** Diana Endicott, Bronson, Kansas, 316-939-4933

Consumer awareness of production practices and product quality is key to marketing. The objective of this project was to give small beef producers a competitive advantage by developing a customer-driven market. The coordinator's strategy is based on product "localness" and customer environmental sensitivity. The coordinator wants to improve customers' environmentally value-added concepts of natural beef, identify customers and track their satisfaction, use positive reinforcement to recognize and reward repeat customers, and empower meat managers to promote natural beef. A Quality System Certification Program (QSCP) Guide has been developed. The coordinator also upgraded kiosk graphics for an in-store consumer survey, developed a newsletter, and planned a beef production and processing workshop for meat managers. The project has been extended to meet intended goals and assimilate data.

### *Linking Downstate Illinois Small-Scale Goat and Sheep Producers with Upstate Consumers (FNC 98-245)*

**SARE Funding:** \$2,338

**Project Coordinator:** Les Gioga, Champaign, Illinois, 217-863-2758

Linking consumers and producers by direct marketing can provide a quality product to consumers and economic benefits to both. The objective of this project was to direct market lambs and kid goats in northern Illinois metro areas. The coordinator intends to locate processors near metro areas who would work with producers and ethnic consumers; identify consumers who desire sheep and goat meat products; publish a directory of consumers, processors, and products; and pool animals to reduce transportation costs. Initial pooled marketing of lambs and goats to a Chicago processor was successful, until the processor lowered the price paid to producers. The producers are now seeking buyers in the Chicago area for approximately 500 animals that will be available in 2000. The project will be extended one year to allow additional time for producers to achieve their objectives.

## Producer grants

### REFLECTIONS

Henry Miller, in Constantine, Michigan, is exploring the economic feasibility of grazing cover crops and the impact that the practice would have on future crop production. (FNC 98-202)



The Sustainable Farming Association of Minnesota received grant funds to host workshops, farm tours, group meetings, exhibits and presentations at farm shows and other venues. Topics include dairying, grazing, soil nutrient management, cover crops, agroforestry, integrated whole-farm systems, and buckwheat. (FNC 96-98)



## *Producer grants*



*A tractor traverses the land on Lavinia McKinney's Brixey, Missouri farm. McKinney organically produces Chinese and indigenous medicinal plants for high profits. (FNC 98-215)*



*A fence line, windmill and hay bales dot the landscape in the Nebraska sandhills.*



## ***Education***

*Machinery Link, Co. (FNC 98-222)*

**SARE Funding:** \$5,000

**Project Coordinator:** David Govert, Cunningham, Kansas, 316-532-2350

Sharing equipment is an option for reducing overhead for producers in the North Central region. The objective of this project was to build a database on the Internet of farmers seeking to co-own, lease, or co-lease farm equipment. The coordinator holds an annual conference to bring together farmers throughout the region to share ideas, needs, and concerns related to sharing equipment and to increase and update the database of active and interested producers. The project has evolved into a business with a full-time staff. In addition to providing service to producers seeking co-ownership or leasing options, the coordinator is developing an Internet equipment auction service with dealers as well as producers participating.

### **Full Report Available**

#### **Information Product:**

Machinery Link, Co. website, [www.machinerylink.com](http://www.machinerylink.com).

## ***Natural Resources***

*Cover Crops Influence on Soil Quality in No-Till Corn/Soybean Rotations (FNC 98-236)*

**SARE Funding:** \$5,000

**Project Coordinator:** Gary Manley, Three Rivers, Michigan, 616-273-7070

Cover crops play an important role in improving and maintaining soil quality. The objective of this project was to conduct on-farm research to study effects of cover crops on soil quality, soil arthropod densities, and bio-diversity. The coordinator established replicated test plots of five cover crop treatments: annual ryegrass, crimson clover, ryegrass and crimson clover, hairy vetch, and no-cover control. Cover crops are inter-seeded in corn during the summer and in soybeans during leaf drop. Data reveal that both density and diversity of arthropods increase with an increase in biomass ground cover.

The type of cover affects species of arthropods differently. Grain yields were highest on plots treated with cover crops. Weeds posed the greatest problem in the control plots, while annual ryegrass provided the best weed control in cover crop plots.

### **Full Report Available**

*Prairie Wetlands (FNC 98-246)*

**SARE Funding:** \$2,836

**Project Coordinator:** David Zahrt, Turin, Iowa, 712-353-6772

Perennial grasses can provide an excellent alternative to row crops on some lowland soils. The objective of this project is to convert 15 acres of hydric clay soils to prairie wetlands for enhanced land utilization and wildlife habitat. The coordinator intended to prepare the seedbed in the spring, drill 5 acres to big bluestem and 5 acres to switchgrass, plant 5 acres to eastern gamma grass in 38-inch rows, and inter-seed corn in 38-inch rows offset 19 inches from the eastern gamma grass. The coordinator also wished to establish a stand of prairie cordgrass in a narrow strip bordering a road ditch. Wet soil conditions in spring 1999 prevented the planting of the perennial grasses in a timely manner. Consequently, the 15 acres were planted to soybeans and seeded to grasses after soybean harvest. Data on rainfall, standing water and establishment of grasses will be collected in 2000. The project was extended to allow additional time for the perennial grasses to become established and to collect the necessary data.

## ***Weed Management***

*Weed and Feed: Vegetable Transplants with Corn Gluten Meal (FNC 98-243)*

**SARE Funding:** \$4,866

**Project Coordinator:** Renee C. Randall, Wauzeka, Wisconsin, 608-875-6026

Nutrient management and weed control require special attention of organic producers. The objectives of this project were to assess the weed and feed value of corn gluten meal under common field conditions in conjunction with transplanted crops. Unforeseen circumstances prevented implementation in 1999. The project has been extended for one year.

*Optimal Amount of Corn Gluten Meal for Weed Control and Soil Amendment Qualities in Organic Production of Strawberries (FNC 98-244)*

**SARE Funding:** \$4,996

**Project Coordinator:** Denice Trimmer-May, Milo, Missouri, 417-944-2818

Cost-efficient weed control is one of the key items in organic crop production. The objective of this project was to determine the optimal amount of corn gluten meal for use as a pre-emergent herbicide in organic strawberries. The coordinator also wanted to investigate the use of corn gluten meal as slow-release nitrogen fertilizer. She established five plots of strawberries. Soil tests were taken to determine a baseline for soil amendments. Plot one was a control, while the four remaining plots received corn gluten meal treatments of 5, 10, 20, and 30 pounds per 1000 square feet, respectively. The coordinator monitored plots for growth rate of strawberries and number and variety of weeds. Early control of broadleaf weeds by corn gluten meal was very apparent; however, there was very little control of foxtail grass, and by July 1, the grass had virtually taken over the plots. Fall soil tests indicated only a slight increase in soil nitrogen compared to the amount measured in spring.

**Full Report Available**

The following two projects were funded with special NCR SARE **Diversity Enhancement** grants. The grants are supervised by the NCR SARE producer grant program coordinator.

*Free-Range/Pastured Poultry Comparison Demonstration with an Organic Feed Component (DNC 98-05)*

**SARE Funding:** \$10,0000

**Project Coordinator:** John Thurman, Hopkins Park, Illinois, 815-944-9914

The objective of this project was to introduce free-range/pastured poultry production to an under served community of African American farmers. The project coordinator constructed four skid shelters and four movable cages; purchased chicks and raised chickens to fryer/broiler stage by free-range and pastured poultry methods; processed and marketed 2,000 chickens; and recorded cost and income. A field day was held to share information with more than 100 people. The project was extended to gather additional data comparing free-range and pastured poultry production.

*Interns for Rosebud WIC Gardens (DNC 98-04)*

**SARE Funding:** \$8,000

**Project Coordinator:** Ann Krush, Mission, South Dakota, 605-856-4481

This project supported youth interns as they implemented the WIC (USDA Women, Infants and Children) Farmers Market Nutrition Program. Teams of youths, guided by neighborhood Project Assistants, designed and planted food bearing shelterbelts and gardens. They contacted WIC recipients and promoted use of WIC coupons for purchasing locally produced, fresh vegetables. The interns also gained valuable experience in finance and marketing.

## Producer grants

### REFLECTIONS

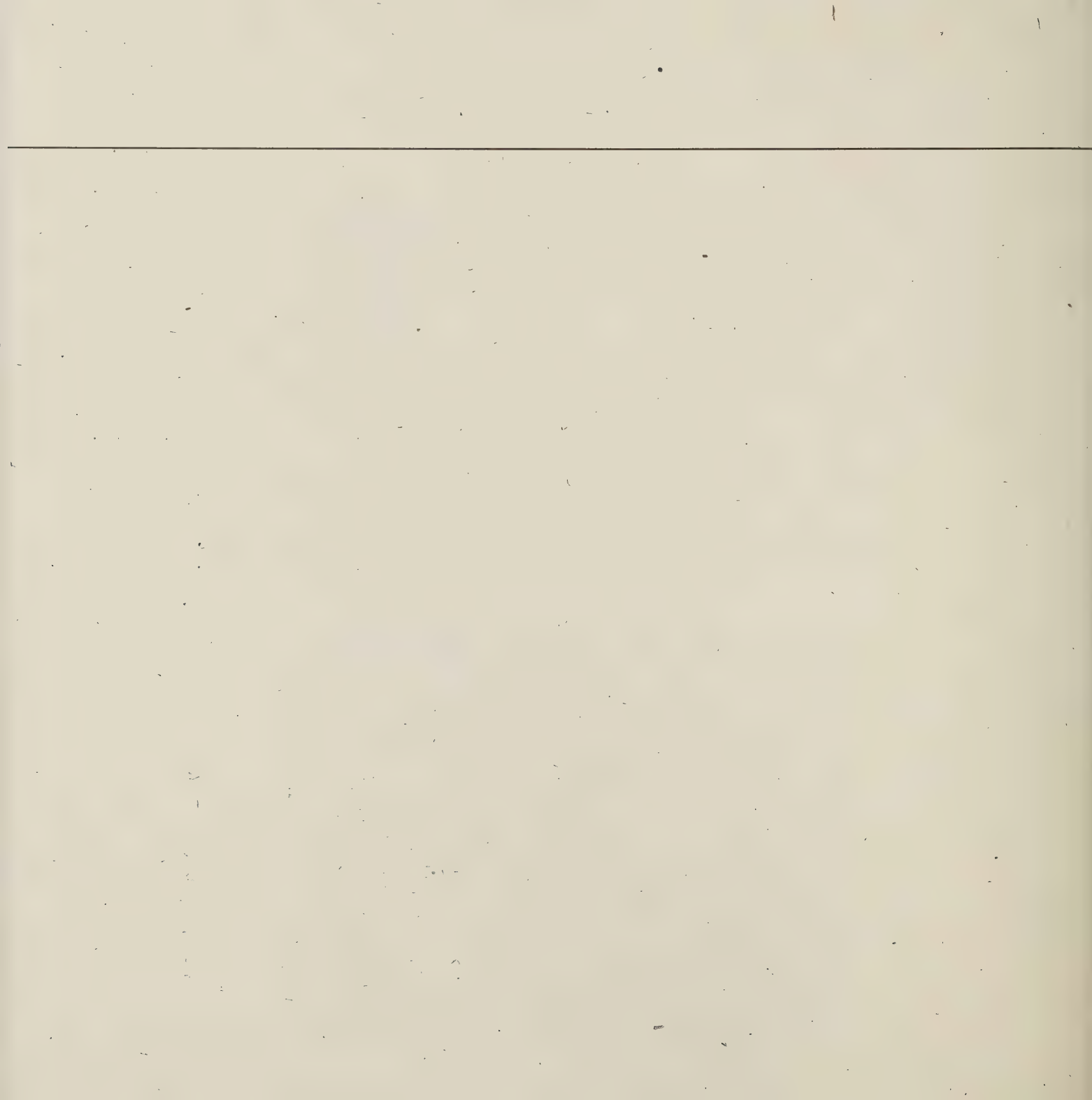
A University of Nebraska project is matching calving and weaning with nutrient content of grazed forages and extending the grazing season in beef cow/calf systems. Don Adams found that by adjusting calving date, nearly 2,000 pounds of harvested feed was replaced by grazing, and net returns were increased about \$70-80 per head. (LNC 97-119)



Farmers, researchers, and Extension personnel participated in research design teams to develop protocols for a long-term investigation of changes during transition to organic and low-input field crop systems. Dale Mutch coordinates this Michigan State University project. (LNC 97-112)







# *getting involved in SARE*

## REFLECTIONS

- Applying for Grants.....113
- Using SARE's National Database .....113
- SARE Resources.....114


## getting involved in SARE

The screenshot shows a Netscape browser window titled "SEARCH the SARE database of projects - Netscape". The address bar shows the URL "http://www.sare.org/san/projects/search.html". The page features the Sustainable Agriculture Network logo in the top right corner. The main heading is "SEARCH the SARE database of projects". Below this, a paragraph explains the search process: "Use the form below to search for SARE projects containing specific words or combinations of words. The text search engine will display a list of matching documents. Each list item is a link to a matching document (the project summary). A brief explanation of the query language is available, along with examples." The search form includes four dropdown menus: "Please select the SARE region:" (set to "Search all regions"), "Please select the project type:" (set to "Search all project types"), "Please select a state or island protectorate:" (set to "All"), and "Please enter your search terms:" (empty). Below the search terms field, instructions state: "You must enter one or more search terms, or use an asterisk (\*) to list all projects. When using more than one search term, you must separate them with the keywords 'or', 'and' or 'not' (see below for explanation)." The "How would you like your results sorted?" dropdown is set to "By date (descending)". A "Search" button is at the bottom of the form. The browser's status bar at the bottom indicates "Document Done".

SEARCH the SARE database of projects - Netscape

File Edit View Go Communicator Help

Bookmarks Netsite: <http://www.sare.org/san/projects/search.html> What's Related

 Sustainable Agriculture Network

**SEARCH the SARE database of projects**

Use the form below to search for SARE projects containing specific words or combinations of words. The text search engine will display a list of matching documents. Each list item is a link to a matching document (the project summary). A brief explanation of the query language is available, along with examples.

Please select the SARE region: Search all regions

Please select the project type: Search all project types

Please select a state or island protectorate: All

Please enter your search terms:

You must enter one or more search terms, or use an asterisk (\*) to list all projects. When using more than one search term, you must separate them with the keywords 'or', 'and' or 'not' (see below for explanation).

How would you like your results sorted? By date (descending)

Search

Document Done



## How to Apply for a NCR SARE Grant

**S**ARE grants are awarded on an annual cycle, in a competitive process. To apply for North Central Region SARE grants:

**Step 1:** Determine which SARE grant program is right for you: the Research and Education Grant Program, the Producer Grant Program, and/or the Professional Development Program (PDP). Learn more about each grant program in this report or by visiting [www.sare.org/ncrsare](http://www.sare.org/ncrsare).

**Step 2:** Determine the relevant deadline for the grant program(s) from which you seek funding.

**Step 3:** Get a copy of the appropriate call for proposals by calling 402-472-7081 or visiting [www.sare.org/ncrsare](http://www.sare.org/ncrsare).

**Step 4:** Contact potential collaborators and develop proposal ideas.

**Step 5:** Search the national SARE database of projects (see column at right) to review previously funded grants in your topic area.

**Step 6:** Get help with proposal writing, if necessary. Call on colleagues, organizations and institutions, or community members, or contact the NCR SARE office for tips and information.

**Step 7:** Submit your proposal, following all guidelines, prior to the specified deadline.

## How to Use SARE's National Database of Projects

**T**he national SARE program has funded more than 1,500 sustainable agriculture projects throughout the U.S. since 1988. SARE's national database, online at [www.sare.org/san/projects](http://www.sare.org/san/projects), features project summaries in a fully searchable format (see facing page).

Project summaries are submitted annually by SARE project coordinators, then edited by regional SARE communication specialists. The database includes the most recent project summary. To obtain a more detailed project report, see the project coordinator's contact information located in the box below each project summary online, or call the appropriate regional SARE office.

You can search project summaries by region, project type (Research and Education Grant Program, Professional Development Program or Producer Grant Program), state, or specific search terms.

## NCR SARE Resources

For more information on the following resources, contact the NCR SARE office at 402-472-7081, 402-472-0280 (fax), or [ncrsare@unl.edu](mailto:ncrsare@unl.edu).

Website: [www.sare.org/ncrsare](http://www.sare.org/ncrsare)

*Field Notes*, quarterly newsletter

Grant lists and program fact sheets

Tabletop display

SARE slide show

Speakers Bureau grants

Marketing conference notebooks

Altmarketing, direct marketing e-mail discussion list

Sustainable agriculture seminar series videos and proceedings

## National SARE/SAN Resources

SAN, or the Sustainable Agriculture Network, is the outreach arm of the national SARE program. For more information about SAN, contact coordinator Andy Clark at 301-504-6425 or [san@nal.usda.gov](mailto:san@nal.usda.gov).

Website: [www.sare.org](http://www.sare.org)

SARE project database: [www.sare.org/san/projects](http://www.sare.org/san/projects)

**BOOKS** (See website for online editions or call 802-656-0484)

*Steel in the Field: A Farmer's Guide to Weed Management*, \$18

*Managing Cover Crops Profitably*, \$19

*Sustainable Agriculture Directory of Expertise*, \$18.95 (online)

*Source Book of Sustainable Agriculture*, \$12 (online)

*The Real Dirt: Farmers Tell about Organic and Low-input Practices*, \$13.95

*The Small Dairy Resource Book*, \$8

*Building Soils for Better Crops*, \$19.95

**FREE PUBLICATIONS** (See website for online editions or call 402-472-7081)

*Marketing Strategies for Farmers and Ranchers*

*How to Conduct Research on your Farm or Ranch*

*Diversify Crops to Boost Profits and Stewardship*

*Profitable Dairy Options* (online only)

*SARE Project Highlights* (1999, 2000)

*10 Years of SARE* (online)

National CSA Directory (online)

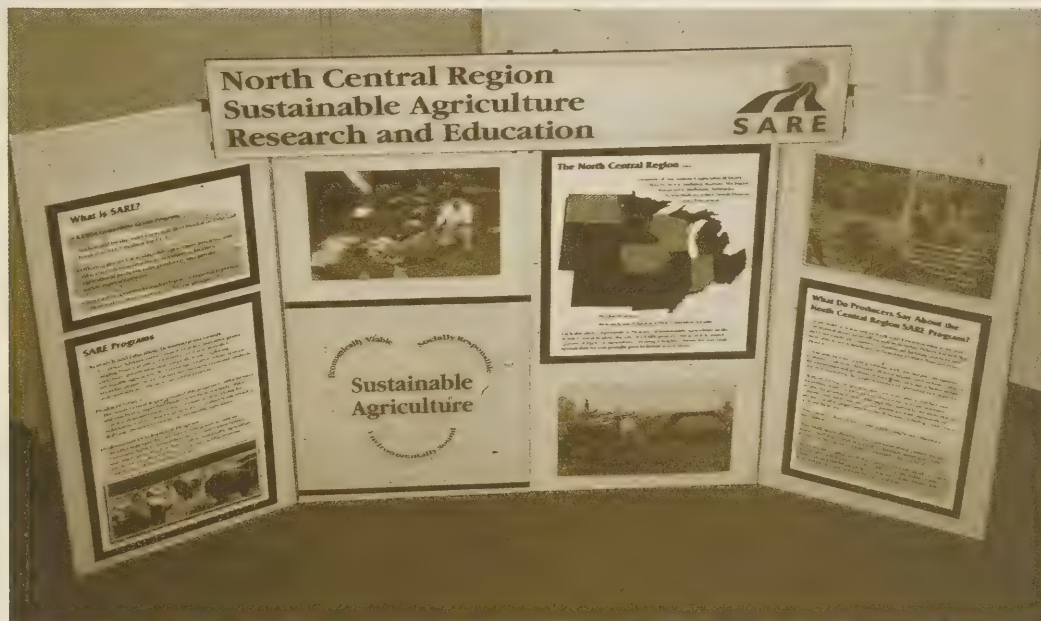
Sustainable Agriculture Tip Sheets (online)

SANET-mg, sustainable agriculture e-mail discussion list (see [www.sare.org/san/htdocs/hypermail](http://www.sare.org/san/htdocs/hypermail))

*Sustainable Agriculture Perspectives from Across America: Guide to Concepts and Principles* (Video, to order, call 402-472-7081)

## *resources from SARE*

## REFLECTIONS



Brett Hampton

NCR SARE offers free use of this tabletop display explaining SARE and depicting sustainable agriculture.



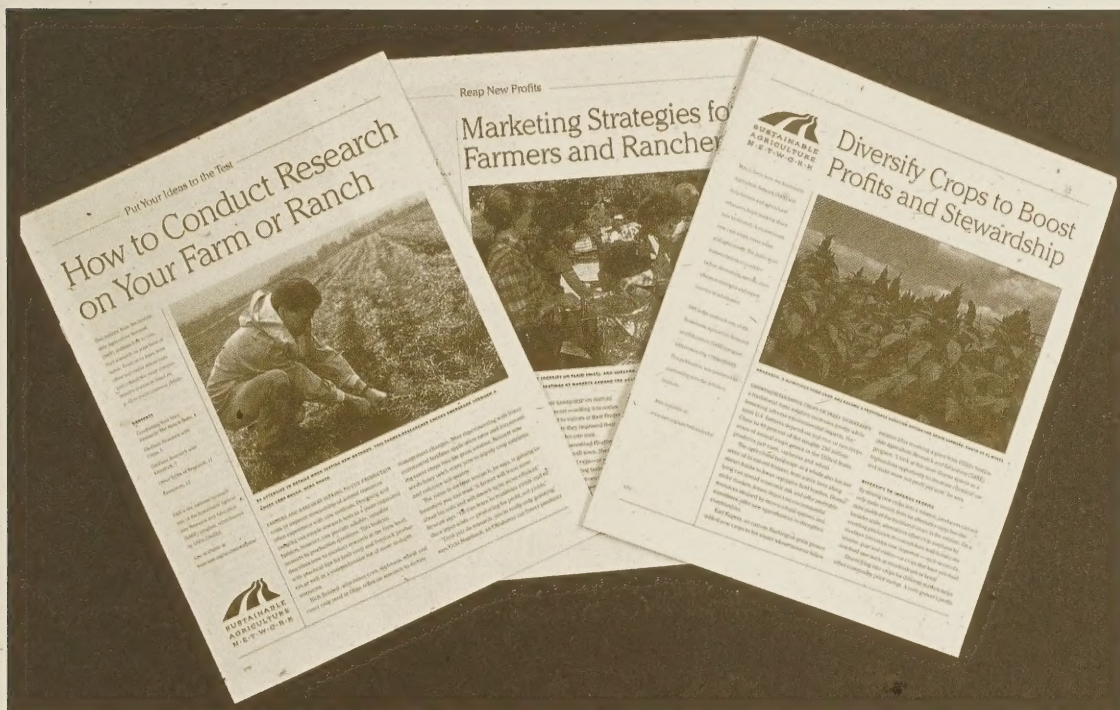
## resources from SARE



Brett Hampton

The national SARE program publishes farmer friendly books, such as *The Small Dairy Resource Book*. This publication provides information sources for farmstead producers and processors.

NCR SARE publishes a quarterly newsletter – *Field Notes*, sharing practical information on SARE grant results and news on funding programs and other educational opportunities.



Brett Hampton

National SARE prints a variety of easy-to-read, helpful bulletins. In 1999, these three publications were first available: *Diversify Crops to Boost Profits and Stewardship*, *How to Conduct Research on your Farm or Ranch* and *Marketing Strategies for Farmers and Ranchers*.







NATIONAL AGRICULTURAL LIBRARY



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